International Symposium

Conserving Cultural and Biological Diversity:

The Role of Sacred Natural Sites and Cultural Landscapes




UNESCO

UNITED NATIONS UNIVERSITY

Japanese Funds-in-Trust

Tokyo (Japan), 30 May-2 June 2005

MaB

Secretariat of the Convention on Biological Diversity

FAO

IUCN
The World Conservation Union

Conserving Cultural and Biological Diversity:

The Role of Sacred Natural Sites and Cultural Landscapes

UNESCO–MAB
Proceedings of the Tokyo Symposium

First published 2006 by UNESCO
Division of Ecological and Earth Sciences
1, rue Miollis
75352 Paris 07 SP, France
Fax: (33-1) 45 68 58 04
http://www.unesco.org/mab

© 2006 by the United Nations Educational, Scientific and Cultural Organization (UNESCO), Paris
ISBN9789231040450
Volume editors: Thomas Schaaf and Cathy Lee
Publication editor: Susan Curran Publishing
Book design and layout by Danesadwork Copenhagen, DK
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical or otherwise without the prior permission of the publisher.
Requests for permission should be addressed to UNESCO, Division of Ecological and Earth Sciences,
1, rue Miollis, 75352 Paris 07 SP, France

(SC-2006/WS/40)

Conserving Cultural and Biological Diversity:

The Role of Sacred Natural Sites and Cultural Landscapes

Tokyo (Japan), 30 May–2 June 2005

United Nations Educational, Scientific and Cultural Organization (UNESCO)

The authors are responsible for the choice and the presentation of the facts contained in this book and for the opinions expressed therein, which are not necessarily those of UNESCO or any of the specialized agencies of the United Nations system. The designations employed and the presentation of material throughout this publication do not imply the expression of any opinion whatsoever on the part of the UNESCO Secretariat concerning the legal status of any country, territory, city or area or of its authorities, or the delimitation of its frontiers or boundaries.

International Symposium

Conserving Cultural and Biological Diversity: The Role of Sacred Natural Sites and Cultural Landscapes

Held at the United Nations University Tokyo (Japan), 30 May–2 June 2005

UNESCO

UNITED NATIONS UNIVERSITY

Japanese Funds-in-Trust

MaB

Secretariat of the Convention on Biological Diversity

FAO

IUCN
The World Conservation Union

Table of contents

Summary Reports

Annexes

Preface

Is there a relationship between cultural and biological diversity? Are these diversities under threat in our ever more globalizing world, and do we need to safeguard them? Can sacred natural sites and associative cultural landscapes play a role in conserving both cultural and biological diversity? These and related questions on the interrelationship between the natural and cultural diversity of our planet were addressed at the international symposium on "Conserving Cultural and Biological Diversity: The Role of Sacred Natural Sites" which took place at the United Nations University (UNU) in Tokyo from 30 May to 2 June 2005. The event constituted one of the highlights of the UNESCO programme on "Reinforcing Linkages between Cultural Diversity and Biodiversity for Sustainable Development" launched in 2004 as a concrete follow-up to the World Summit on Sustainable Development (Johannesburg, 2002).

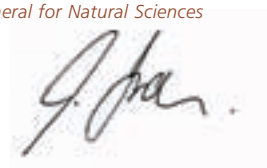
Ecologists and hydrologists, anthropologists, government officials and representatives of local and indigenous communities exchanged views on how to prevent adverse impacts on the traditional knowledge and lifestyles of indigenous and local communities. They expressed the view that all over the world, sacred natural sites and cultural landscapes are expressions of traditional beliefs and land management systems of local and indigenous communities. They further claimed that understanding the links between nature and culture is important for safeguarding both biological and cultural diversity. Attempting to bring culture and nature closer together in a comprehensive approach, the symposium provided the floor for presenting case studies on sacred natural sites and cultural landscapes from the world over.

As outcomes of the symposium, the participants adopted a *Declaration on the Role of Sacred Natural Sites and Cultural Landscapes in the Conservation of Biological and Cultural Diversity*, and took note of and recommended the *UNESCO/IUCN Working Guidelines on the Conservation and Management of Sacred Natural Sites*, which are annexed to the symposium proceedings.

The Declaration and the Guidelines can refer to biosphere reserves, World Heritage sites and any other protected areas which contain sacred areas. In this manner we hope to contribute to the preservation of our tangible and intangible heritage.

The symposium was embedded within the activities of the World EXPO 2005 which took place in Aichi (Japan) from March to September 2005. We thank the Government of Japan for its generous financial support to the symposium. The symposium was organized by UNESCO in collaboration with UNU, IUCN-The World Conservation Union, the Secretariat of the Convention on Biological Diversity (CBD), the Secretariat of the UN Permanent Forum on Indigenous Issues (SPFII), and the Food and Agriculture Organization of the UN (FAO), in partnership with the Japanese Agency for Cultural Affairs. We wish to thank all our partners for having worked together to make this important symposium possible, and in particular we wish to express our gratitude to UNU for having hosted the symposium. UNESCO looks forward to continue work with these and other partners so as to enhance our understanding of the linkages between cultural and biological diversity.

W. Erdelen
Assistant Director-General for Natural Sciences
UNESCO



F. Rivière
Assistant Director-General for Culture
UNESCO

Linking cultural and biological diversity: the UNESCO-MAB approach

Thomas Schaaf, Division of Ecological and Earth Sciences, Man and the Biosphere (MAB) Programme, UNESCO, France

From the late nineteenth century, environmental conservation has increasingly been practised through legally protected areas (such as national parks or nature reserves) designated by government authorities. The natural resources found within protected areas are generally spared from direct human use, as for example in the case of hunting or logging. While the designation of 'reserve' areas is urgently needed in a world facing shrinking natural resources, the designation of protected areas is often met with outright opposition from local people; land which could be used for economic purposes is now being turned into areas of restricted use. Land-use conflicts are inevitable among various stakeholders with different aspirations for land use and if consensus cannot be reached.

But perhaps there are other means of sustainably protecting biotic and abiotic resources. Can environmental conservation be practised in a more sustainable way if it is aligned with historical practices and traditional values that are shared among, and are an integral part of the cultural integrity of, a given community? Can cultural values and traditional belief systems be powerful agents for the protection of the world's physical environment and its living organisms? Is it possible to 'link' conservation of cultural and biological diversity?

UNESCO's Man and the Biosphere (MAB) Programme, with its World Network of Biosphere Reserves, may provide some answers. As Biosphere Reserves are based on participatory decision-making processes by local people they are often considered as an appropriate tool to reconcile environmental conservation and sustainable development. The Seville Strategy for Biosphere Reserves recommends that we 'utilize biosphere reserves as models of land management and of approaches to sustainable development'. At the national level in particular the strategy suggests that we should 'establish, strengthen or extend biosphere reserves to include areas where traditional lifestyles and indigenous uses of biodiversity are practised and including sacred sites' (see UNESCO, 1996, p. 7). Hence, the UNESCO-MAB Biosphere Reserve concept clearly recognizes the importance of sacred sites and places them within the context of sustainable development. Many biosphere reserves contain sacred places in their core areas, such as Uluru (Ayers Rock – Mount Olga) Biosphere Reserve in Australia and Hawaii Volcanoes Biosphere Reserve in the USA.

Traditional societies around the world have assigned a special status to natural sites considered as sacred – either through the perception of residing deities and spirits, as shrines dedicated to ancestors, or as privileged spiritual sites for contemplation, meditation and even purification of the inner self. The sacredness of a site distinguishes it from the adjoining non-sacred areas that generally make up the bulk of the land area; hence a sacred site can be a relatively small area of land. But as sacred sites are places of seclusion from the non-sacred world they are generally subject to restricted access and therefore less direct human impact in terms of the economic exploitation of natural resources.

In this way sacred natural sites may comprise important reservoirs of biological diversity. As plant or wildlife sanctuaries they may preserve plant and animal species that have become rare in non-sacred areas.

Sacred sites can be found in different ecosystems or biomes, but mostly in the following: mountains, rivers and lakes, forests (groves), caves, and even islands. Moreover, anthropogenically created or modified landscapes, such as cultural landscapes, and temple sites and gardens can play an important role in the protection of plants and animals.

In most cultures and societies, mountains are eminent sacred sites. As elevated land masses they inspire a feeling of detachment, seclusion and elevation from the non-sacred lowlands. They may stimulate a feeling of closeness to higher beings, and they provide 'vision', thus inducing spiritual enlightenment. Pilgrims who toil up a mountain peak may experience catharsis and/or go through different stages of initiation. From the natural sciences point of view, mountains offer a whole variety of different vegetation zones and animal habitats which change with altitude and exposure.

Mountains as 'islands' towering over lowlands are often important centres of endemism and biological 'hotspots' with high conservation ecology value.

Rivers, wells and lakes are also considered sacred by many world cultures. Water is the basis for life and as such guarantees the survival of plant and animal life in addition to human life. The protection of critical sites affecting the hydrological cycle is therefore vital, and the designation of a water source or reservoir as 'sacred' greatly enhances its protection.

Forests, and more particularly groves, are often considered as abodes of deities and can be considered as sacred. In some parts of the world with strong ancestral belief systems, burial grounds can turn into groves and possibly into outright forests over time. Sacred groves are particularly well marked in non-forested areas such as savannahs and steppes. Their presence in drylands underlines their 'special' character as areas of seclusion that render visible the borderline between the non-sacred and the sacred world. If sacred forests exist in mountains, they can help to prevent soil erosion.

In the same way as forests or groves, do islands embody the seclusion principle of sacred areas? They can be important centres of endemism, as in the case of mountains, and they can possibly represent habitats of unique plant and animal species.

The seclusion element of sacred natural sites is also illustrated in caves, as they shut out the profane world. They can also be doors to an 'underworld' or mark the transition from a 'here' to a 'there'. Although caves as such are not very species-rich (apart from bats, fungi and some insects), they may be places of very high endemism.

There are many other interesting questions which may arise in the context of sacred natural sites and their roles in conserving biological diversity in different ecosystems. The UNESCO-MAB Programme, as one of the main organizers of the International Symposium on Conserving Cultural and Biological Diversity: The Role of Sacred Natural Sites and Cultural Landscapes, which took place in Tokyo in June 2005, wishes to generate new knowledge of, and insights into, the traditional ways of preserving cultural and biological diversity and managing natural resources. Accordingly, Session 1 was designed to explore the 'The phenomenon of sacred mountains: traditional worship and conservation'; Session 2 looked at 'Sacred landscapes, biodiversity and traditional resource use'; Session 3 was concerned with 'Sacred spaces and routes', and Sessions 4 and 5 underlined the interlinkages of water, culture and the environment. Session 6 raised the issue of 'Food security and livelihoods' in the context of sacred natural sites.

Another symposium objective was to explore the linkages of tangible and intangible heritage in the light of nature–culture interactions, as supported by Sessions 7 and 8.

A third symposium objective was to preserve the traditional knowledge of indigenous and local communities for the conservation and sustainable use of biological diversity, to improve respect for traditional knowledge in view of ethically safeguarding cultural diversity, and the creation of economic and social benefits for indigenous and local communities. These themes were tackled in Sessions 6 and 9.

The symposium also served as a platform to consider various guidelines for appropriate environmental conservation and sustainable development based on traditional beliefs and sociocultural acceptance. These guidelines include:

* the UNESCO/World Conservation Union (IUCN) Working Guidelines on the Conservation and Management of Sacred Natural Sites (included as Annex II)
* the Yamato Declaration on Integrated Approaches for Safeguarding Tangible and Intangible Cultural Heritage (included as Annex III)
* the Convention on Biological Diversity (CBD) Akwé:Kon voluntary guidelines for the conduct of cultural, environmental and social impact assessments regarding developments proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities (included as Annex IV).

The symposium adopted a Declaration which is included as Annex I of this publication. This Declaration invites intergovernmental and non-governmental organizations, the scientific community and the private sector to enhance cooperation and to continue collaborative work in order to safeguard cultural and biological diversity situated in sacred natural sites and cultural landscapes, and to better understand the interaction of nature and culture through comparative research;

The symposium was the result of combining the similar and yet complementary efforts of different partner institutions to elucidate the role of sacred natural sites and cultural landscapes in the context of cultural and biological diversity. In a true inter-agency spirit of collaboration, the following organizations contributed to the success of the symposium: the United Nations University (which also hosted the symposium); the World Conservation Union (IUCN), the Secretariat of the CBD, the United Nations Permanent Forum on Indigenous Issues (UNPFII), the Food and Agriculture Organization of the United Nations (FAO), and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Within UNESCO, the Man and the Biosphere (MAB) Programme, the International Hydrological Programme (IHP), the World Heritage Centre (in charge of the World Heritage Convention), and the Intangible Heritage Section (in charge of the Convention on the Safeguarding of the Intangible Heritage) worked together thus showing that nature and culture are closely interlinked. In a world marked by unprecedented species loss, the conservation of biological diversity becomes vital. In a world moving towards globalization, the safeguarding of cultural diversity is essential in reminding us of our identities while remaining tolerant to other worldviews. Sacred natural sites and cultural landscapes are places where biological and cultural diversity can reinforce each other.

References and further reading

Schaaf, Thomas. 1996. Sacred groves – environmental conservation based on traditional beliefs. *Culture and Agriculture, UNESCO, World Decade for Cultural Development.* Paris, UNESCO.

Schaaf, Thomas. 1998. Sacred groves in Ghana: experiences from an integrated project. P. S. Ramakrishnan, K. G. Saxena and U. M. Chandrashekara (Eds.), *Conserving the Sacred for Biodiversity Management*. USA/India, Science Publishers.

UNESCO. 1996. Biosphere Reserves: *The Seville Strategy and the Statutory Framework of the World Network*. Paris, UNESCO.

World Heritage: linking nature and culture

Mechtild Rössler, World Heritage Centre, UNESCO, France

The World Heritage Convention (1972) is a unique international legal instrument protecting both natural and cultural sites of outstanding universal value. It links the safeguarding of tangible and intangible heritage as well as inhabited protected areas.

The interpretation of World Heritage has evolved considerably over the past thirty years. World Heritage is no longer strictly limited to the protection of nature and the world's monuments; the diversity of living cultural places, natural sacred sites and cultural landscapes is also now included on the World Heritage List.

The landmark decision in 1992 to include cultural landscapes has enhanced the recognition of outstanding linkages between nature and culture, people and places, and between the intangible and the tangible. It also provided a new focus on key areas of biological and cultural diversity, including sustainable use. At the same time innovations were introduced with the acceptance of traditional custodianship and customary land tenure in World Heritage protection. These developments, on both the conceptual and operational levels, have highlighted the stewardship role of World Heritage conservation with far-reaching impact for other conservation instruments.

The inscription of Tongariro National Park (New Zealand) as the first cultural landscape on the World Heritage List for the spiritual links of the Maori people with their environment proved that UNESCO's World Heritage Convention is pioneering new approaches in the protection of the planet's cultural and natural diversity.

New challenges have emerged with the broadened definition of heritage and the links between nature and culture. These were discussed at a number of fora, in particular at the occasion of the thirtieth anniversary of the World Heritage Convention with a specific workshop on cultural landscapes (UNESCO, 2002) and the challenges of conservation; the World Parks Congress in 2003 (Durban, South Africa) with a focus on protected areas in a broader landscape perspective (Rössler and Mitchell, 2005); and an international conference on 'Linking Universal and Local Values: Managing a Sustainable Future for World Heritage' (UNESCO, 2004: see specifically Rössler, 2004).

At the same time new thematic frameworks were developed including long linear cultural landscapes and serial sites (e.g. Ruta Inca/Quapac Nan; the Pacific Islands/Line Islands project) to enhance a new conservation perspective encouraging international collaboration and shared experiences of managing complex living heritage sites. States, parties and experts explored under-represented themes and categories and worked towards shared heritage among nations.

At the same time the World Heritage Committee and its Secretariat, the UNESCO World Heritage Centre, explored links and synergies with other conventions and programmes such as the Food and Agriculture Organization (FAO) Conservation and Sustainable Management of Globally Important Ingenious Agricultural Heritage Systems (GIAHS) project and the UN Environment Programme (UNEP)–UNESCO meetings on linking cultural and biological diversity, within UNESCO, with its comprehensive set of cultural heritage instruments including the Convention for the Safeguarding of the Intangible Cultural Heritage (2003), as well as other UN bodies (Convention on Biological Diversity 1992, Ramsar Convention 1971).

A major step towards an integrated concept of natural and cultural heritage was the merging of the natural and cultural criteria in the Operational Guidelines for the Implementation of the World Heritage Convention in February 2005. The unified set of criteria had been being requested by expert groups since 1998 (UNESCO, 1999). It may not modify the procedure of nominating a property for the World Heritage List (as natural, cultural or mixed) but it does provide a new vision in line with the World Heritage Convention itself, specifically that natural and cultural heritage are not separable and have been explicitly brought together in one international instrument in order to be transmitted together to future generations.

With many World Heritage partners, the Advisory Bodies under the Convention (the World Conservation Union (IUCN), the International Council on Monuments and Sites (ICOMOS) and the International Centre for the Study of the Preservation and

Restoration of Cultural Property (ICCROM)) as well as numerous stakeholders, we strive to develop guiding principles and case studies of excellence on conservation practices and management of nature/culture interactions. With a common approach and joint efforts we will be able to enhance new concepts in global heritage conservation.

The Tokyo symposium had in particular the following objectives:

* to review case studies which were selected from the UNESCO programme on linking biological and cultural diversity
* to raise awareness of the interaction between people and the environment
* to assist States Parties and heritage experts in the reinterpretation of the values of existing World Heritage properties
* to stimulate international debate and collaboration, in particular with other conventions and programmes.

On behalf of the Director of the World Heritage Centre and my colleagues I would like to express my sincere thanks to the United Nations University, partners in the organization of this meeting, and the financial donors for supporting such a challenging event.

References and further reading

Rössler, M. 2004. Managing World Heritage cultural landscapes and sacred sites. *Linking Universal and Local Values: Managing a Sustainable Future for World Heritage.* Proceedings of a conference organized by the Netherlands National Commission for UNESCO 22–24 May 2004. World Heritage Papers 13. Paris, UNESCO World Heritage Centre, pp. 45–48. http://whc.unesco.org/documents/publi_wh_papers_13_en.pdf (Accessed 3 May 2006.)

Rössler, M. and Mitchell, N. 2005. Landscape linkages without boundaries? *World Heritage at the Fifth IUCN World Parks Congress. Durban South Africa, 8–17 September 2003.* World Heritage reports 16. Paris, UNESCO World Heritage Centre, pp. 23–26.

UNESCO. 1999. Linking Nature and Culture. Bernd Von Droste, Mechtild Rössler and Sarah Titchen (Eds.), *Report of the Global Strategy Natural and Cultural Heritage Expert Meeting, 25–29 March 1998, Amsterdam, The Netherlands.* The Hague, UNESCO/Ministry for Foreign Affairs/Ministry for Education, Science, and Culture.

UNESCO. 2002.*Cultural Landscapes: The Challenges of Conservation.. Shared Legacy, Common Responsibility. Associated Workshops, 11–12 November 2002, Ferrara, Italy.* World Heritage papers 7. Paris, UNESCO World Heritage Centre. http://whc.unesco.org/documents/publi_wh_papers_07_en.pdf (Accessed 3 May 2006.)

UNESCO. 2004. *Linking Universal and Local Values: Managing a Sustainable Future for World Heritage.* Proceedings of a conference organized by the Netherlands National Commission for UNESCO, 22–24 May 2004. World Heritage Papers 13. Paris, UNESCO World Heritage Centre. http://whc.unesco.org/documents/publi_wh_papers_13_en.pdf (Accessed 3 May 2006.)

Welcome address

Hans van Ginkel, United Nations University, Japan

Mr Yasuyuki Aoshima, Director of UNESCO-Beijing office,
Mr Hayao Kawai, Commissioner of the Japanese Agency for Cultural Affairs,
Colleagues of UNESCO, the World Conservation Union (IUCN), the Secretariat of the Convention on Biological Diversity (CBD), the Secretariat of the UN Permanent Forum on Indigenous Issues (UNPFII), and FAO,
Distinguished participants,

It is a great pleasure for me to welcome you to the United Nations University (UNU) and this symposium.

I would like to start off by expressing my gratitude to UNESCO and other partners for co-organizing this symposium. It is indeed the culmination point of many months of planning and hard work by all colleagues involved.

As you are aware, one of the United Nations Millennium Development Goals is to ensure environmental sustainability. It is essential to develop and implement new actions to reverse the loss of biodiversity as it undermines the earth's ecosystem, upon which our society depends. On 19 May 2005, the Millennium Ecosystem Assessment (MA) report warned that 'Future generations are at risk if current patterns of biodiversity loss continue to increase.' The report concludes that in the last fifty years, human actions have changed ecosystems more than at any other time in history. While this has lifted many people out of poverty, at the same time, unsustainable patterns of production and consumption have led to a loss of biodiversity. On 22 May 2005, the International Day for Biodiversity on the theme 'Biodiversity: Life Insurance for our Changing World' reminded us of the central role played by biodiversity in underpinning sustainable development. The symposium presents an important opportunity to discuss innovative approaches for the conservation of biodiversity.

Destruction of wildlife habitats by human activities has been the primary cause of the accelerating loss of biodiversity. The initial approach to biodiversity conservation, and still the most common, is to create more and more protected areas for endangered and representative wildlife. Many biodiversity-rich habitats have been assigned as protected areas with guards to prevent human activities. These conventional protected areas cover only a small portion of the earth. The expansion of such kinds of protected areas is increasingly difficult as future population growth largely occurs in many developing countries where biodiversity is still rich. Local people have limited choices. They must continue to cultivate for their livelihoods. Removing land from local people to create protected areas represents an opportunity cost to them and increases production pressure on the remaining lands. Expansion of protected areas would only worsen the burden that local people – largely in developing countries – have to bear. We face an increasingly difficult challenge in the search for new approaches to conserve biodiversity while improving local livelihoods.

Most of the globe's biodiversity will remain outside conventional protected areas and will be managed by local people and communities. Long before the creation of conventional protected areas, many traditional cultures had already established sacred sites, many of which also host important biodiversity. In 2000, I visited a UNU project field site in Xishuangbanna, south-western China. The Hani people in Daka village have reserved an area for a graveyard, which is also biologically diverse. I am sure that Professor Pei Shengji of the Chinese Academy of Sciences will, at Session 7, give us other examples of community practices involving sacred groves in Xishuangbanna. Many other case studies to be presented at this symposium over the next few days will demonstrate the roles of sacred sites in conserving biodiversity. However, increasing globalization of mainstream lifestyles could endanger those valuable cultural practices. Promotion of these traditional cultural practices with their positive impacts on biodiversity can contribute to saving biodiversity as well as cultural diversity.

Together with 'neglect' of these traditional cultures, there is also limited understanding and support of what farmers and

communities can do to help maintain and enhance biodiversity even in intensively cultivated agricultural landscapes. In the trend towards uniformity, a significant proportion of farmers and communities continue to develop agrodiversity: 'the many ways in which farmers use the natural diversity of the environment for production, including not only their choice of crops but also their management of land, water and biota as a whole'. Natural diversity, including diversity at the genetic, species and landscape levels, as well as ecological processes, is harnessed to increase total production, enhance sustainability and diversify sources of income. Evidence is accumulating that not only is there a wealth of good practice in many previously overlooked local techniques for biodiversity conservation, but also such techniques reduce risks of land degradation and climate change, support local livelihoods and give tangible evidence of sustainability.

Recognizing the potential of agricultural biodiversity, UNU's Project on People, Land Management and Environmental Change (PLEC) has brought together the best of scientists and farmers in twelve participating countries for identification, evaluation and promotion of farmers' resource management systems, and practices that conserve ecological processes and embrace diversity for generating income and coping with changes in social and natural landscapes. PLEC deliberately dwells on sustainable adaptations by small farmers to varied environments under growing population pressure and all other forms of stress, and principally through the high degree of structural, spatial and trophic, as well as species, diversity. Demonstration sites are set up in a wide range of agro-ecosystems in formerly forested regions, semi-arid regions, mountains and wetlands of globally significant biodiversity.

PLEC teams work in substantially different environments in twelve developing countries. The biophysical environments as well as their economic, social and cultural contexts are quite varied. They all have found that local farmers and communities, under certain circumstances, are capable of sustainable management of biodiversity while at the same time improving their own livelihoods. Far from being simply 'traditional', which to many means archaic and outdated, local practices have been adapted enabling many to live with the new opportunities and challenges brought by the forces of globalization. For example, the PLEC team in Northern Thailand recently reported that marriage relations are important routes of seed exchange of rice varieties among shifting-cultivators. There are several other norms deeply embedded in cultural practices. It is a 'rule' that children maintain a specific family variety after their parents' death in local villages. The teams in Brazil, China and Ghana have also demonstrated the roles of community reserves, including sacred groves, for the conservation of biodiversity.

PLEC is now focused on mainstreaming its lessons and experiences into national and international programmes. A major offshoot initiative of PLEC on Sustainable Land Management for Mitigating Land Degradation, Enhancing Agricultural Biodiversity and Alleviating Poverty (SLaM) in Ghana will be launched by the Ghanaian Minister of Science and Environment in Accra, Ghana on 1 June 2005. Another offshoot of PLEC, Sustainable Land Management in Mountainous Regions: Thailand, Lao PDR and China (Yunnan Province), which is under preparation, will focus on new approaches harnessing local skills, knowledge, practices and actions with positive impact on the natural resource, and using them to enhance relevant national strategies, programmes and action plans, especially of reforestation, and guarding against those with negative tendencies.

UNU-PLEC is collaborating with the Food and Agriculture Organization of the United Nations (FAO) on a programme on Conservation and Sustainable Management of Globally Important Ingenious Agricultural Heritage Systems (GIAHS). While our FAO colleague will introduce the GIAHS programme, one of my colleagues will present to you more specific information on this collaboration in Session 6. In fact, after this symposium, UNU-PLEC will collaborate with FAO, the Chinese Ministry of Agriculture and other partners in organizing a GIAHS workshop on the rice–fish culture system in China, from 9–11 June 2005.

In addition to PLEC, other UNU initiatives under the programme of sustainable ecosystem management also pay much attention to traditional cultures and local knowledge. The UNU initiative on Sustainable Land Management in the High Pamir and Pamir-Alai Mountains: an integrated and transboundary initiative in Central Asia, funded by the Global Environment Facility (GEF), is also focusing attention on the role of local practice in sustainable land management systems for the preservation and rehabilitation of the ecosystems and watersheds in the region. The UNU dryland programme has long emphasized roles of traditional knowledge and practices in managing dryland resources. The UNU Pantanal Regional Environment Programme (PREP) is also looking into roles of local people's customs and practices for protection of this pristine wetland in South America. The integration and promotion of traditional cultures and local practices in national and international programmes will continue to be a major theme for UNU.

Biodiversity is a global common asset, benefiting all. It is very important to mobilize and increase international support for rewarding those people and communities that save biodiversity in developing countries. The UNU Institute of Advanced Studies (UNU-IAS), our research and training centre located in Yokohama, has an initiative which focuses on issues related to access to genetic resources and traditional knowledge, and the fair and equitable sharing of benefits derived from their use.

Building upon lessons learned, our continuing partnerships and the outcomes of this symposium, UNU will continue to play its part to support research, training and dissemination activities that contribute to the sustainable management of biodiversity through integrating locally developed practices into the national and international programmes.

I wish you much success in your deliberations here over the next two days.

Thank you.

Welcome address

Yasuyuki Aoshima, UNESCO-Beijing, China

Professor Hans van Ginkel, Rector of the United Nations University,
Mr Hayao Kawai, Commissioner of the Japanese Agency for Cultural Affairs,
Colleagues of United Nations bodies and organizations, and of the IUCN,
Ladies and gentlemen,

On behalf of Mr Koïchiro Matsuura, Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO), it gives me great pleasure to welcome you all to this symposium.

It has been said that there is only one Earth, but that there are many different worlds. Different worldviews do not only have significant political and socio-economic repercussions, they also determine the way in which people perceive and interact with nature, thus forming their specific culture. Natural ecosystems cannot be understood, conserved and managed without recognizing the human cultures that shape them, since biological and cultural diversities are mutually reinforcing and interdependent. Together, cultural diversity and biological diversity hold the key to ensuring resilience in both social and ecological systems. This explains the commitment of UNESCO, through its environmental sciences and cultural mandate, in promoting awareness and understanding of the relationships between biological and cultural diversity as key aspects of sustainable development.

In addition, we also need to take action in helping to conserve our earth's cultural and biological heritage. In a world marked by globalization, we need to preserve cultural diversity which is an ethical imperative 'as necessary for humankind as biodiversity is for nature', as stated in Article 1 of the UNESCO Declaration on Cultural Diversity; in a world that witnesses an unprecedented species extinction rate, the protection of biological diversity is not only a must for our own survival but also an obligation towards nature and future generations. In order to preserve cultural integrity and biological diversity, culture and science must work hand in hand in a holistic manner to find new approaches to sustain our planet's diversity.

Sacred natural sites and cultural landscapes offer the possibility to elaborate such *new* approaches – although they present humanity's *oldest* measures by which nature is respected in its own right. Such areas have evolved over the centuries, if not millennia, through the interaction of people and nature. It is only in recent years that scientists, anthropologists and conservation experts have rediscovered that such special places hold tremendous value for the preservation of cultural and biological diversity. Many local and indigenous communities need the world's recognition for their specific role as custodians of sacred natural sites and cultural landscapes.

For this reason, UNESCO's Natural Sciences and Culture Sectors collaborate to study the interlinkage between nature and culture as exemplified by sacred natural sites and cultural landscapes. I am pleased to inform you that UNESCO has carried out extensive work on this subject over the last decade in different parts of the world. Within the UNESCO World Network of Biosphere Reserves, many areas contain sacred natural sites that – for their conservation and management – pose both challenges as well as opportunities. The same is true for World Heritage sites inscribed on the list of the World Heritage Convention.

This symposium will also explore relations between elements of tangible and intangible heritage. It is important in this regard to highlight that in October 2003 UNESCO's Member States adopted a Convention for the Safeguarding of Intangible Cultural Heritage. This convention, often referred to as the 2003 Convention, assigns a place of pride and recognition in its own right to intangible cultural heritage, which encompasses not only oral expressions and traditions, traditional music, dance and theatre, but also traditional knowledge about nature, rituals, social traditions and handicrafts,

and associated objects and cultural spaces. The 2003 Convention, which will be further introduced during Session 7 of this symposium, will enter into force by late 2005 following ratification by thirty Member States. This convention fills an important gap in UNESCO's international legal instruments for the protection and safeguarding of our heritage.

The relations between tangible and intangible heritage, and integrated approaches for their safeguard were already extensively discussed in October 2004 at a meeting of experts organized nearby in Nara. That meeting resulted in the adoption of the Yamato Declaration which recommended the elaboration of safeguarding and protection measures that are mutually beneficial and reinforcing. The declaration, while acknowledging the frequent interdependency of elements of the tangible and intangible heritage of communities, also stressed that many elements of the Intangible Cultural Heritage Convention do not depend on the existence of specific places or objects. Both documents, the 2003 Convention and the Yamato Declaration, are available for your information in Japanese and in English at this symposium.

It gives me great pleasure to inform you that UNESCO, in planning this symposium, has benefited from the expertise and partnership of IUCN (the World Conservation Union), as well as the following sister organizations within the United Nations system as co-organizers of the symposium:

* the United Nations University
* the Secretariat of the Convention on Biological Diversity
* the Secretariat of the UN Permanent Forum on Indigenous Issues
* the Food and Agriculture Organization of the United Nations.

I am confident that this symposium will serve as a springboard for future collaboration among our organizations on this important theme.

I also wish to extend my gratitude to the Japanese Government for providing funding towards the symposium. As we know, the symposium is an activity of the World EXPO 2005 currently held in Aichi, whose overall themes on 'Nature's Wisdom' and 'Celebrating Diversity' provide the background theme for our symposium.

Finally, I wish to thank in particular the Rector of the United Nations University, Professor Hans van Ginkel, for hosting the symposium at the UNU Centre.

Ladies and gentlemen, I wish us all very fruitful discussions over the next few days on how we all can work together to better conserve cultural and biological diversity.

Thank you.

Welcome address

Hayao Kawai, Japanese Commissioner of Cultural Affairs, Japan

It is a great honour for us to have the UNESCO International Symposium 'Conserving Cultural and Biological Diversity: The Role of Sacred Natural Sites and Cultural Landscapes' held here in Japan as part of Aichi Expo 2005.

With the remarkable progress made in science and technology in the twentieth century, human beings have pushed the boundaries of development beyond what nature can withstand, with the result that we see the rise of various phenomena signalling impending crises. Taking as its theme 'Nature's Wisdom', Expo 2005 in Aichi aims for a global perspective on the pursuit of sustainable coexistence for all forms of life on Earth. Japan is extremely proud to host this event, which is held with the participation of 120 countries, and four international institutions.

While Japan is one of the most developed countries in the world with regard to science and technology, we have since ancient times possessed a profound respect for nature, and have tried to live in harmony with our natural surroundings. As one example of that I would like to tell you about the Sacred Sites and Pilgrimage Routes in the Kii Mountain Range, which was inscribed on the UNESCO World Heritage List in 2004.

The Kii Mountain Range lies in the southernmost part of mainland Japan, where rich, dense forests grow, nurtured by abundant supplies of water. The three sacred sites, Yoshino and Omine, Kumano Sanzan, and Koyasan, have been worshipped as holy mountains for over 1,200 years. These sites include places sacred to both Shinto and Buddhism, borne of the various religious forms present in these mountains including Shinto, the Japanese 'way of the gods'; Buddhism, in the unique form which developed in Japan after being brought here from China; and Shugendo, which is a combination of both Shinto and Buddhism. The pilgrimage routes connecting the sites are not merely a way to get somewhere, but paths which allow us, as we walk, to sense the spirits that reside in nature. In recognition of its outstanding universal value, the Sacred Sites and Pilgrimage Routes in the Kii Mountain Range were inscribed as a cultural landscape.

The number of cultural landscapes inscribed on the World Heritage List has been increasing every year. This is a reflection of the growing recognition of the value and importance of cultural landscapes throughout the world.

Cultural landscapes, the combined work of man and nature, are not the work of a single day, but rather the result of long years of human coexistence with nature, and in them we see tremendous diversity of culture. Cultural landscapes are living cultural property, and are inherited and passed on through the organic interrelation of the various life forms within them. In the past, before the development of science and technology, such landscapes were passed on unchanged. Now, however, they are at risk of destruction or of simply being thrown away, their value unrecognized.

Reforms to the Law for the Protection of Cultural Properties in April 2005 have seen the addition of cultural landscapes as a new category of cultural property, defined as 'landscape areas that have developed in association with the modes of life or livelihoods of the people and the natural features of the region, which are indispensable for the understanding of our people's modes of life and livelihoods'. The national government and local authorities will be cooperating to safeguard cultural landscapes under the new law.

The protection of cultural landscapes contributes to the diversity of life and culture. The aim of the Agency for Cultural Affairs is the creation of a society that exists in harmony with nature, by safeguarding the cultural heritage to be inherited by future generations.

Finally, I would like to express once again my deepest gratitude to UNESCO, the United Nations University, the World Conservation Union (IUCN), the Secretariat of the Convention on Biological Diversity (SCBD), the UN Permanent Forum on Indigenous Issues (UNPFII) and the Food and Agriculture Organization of the United Nations (FAO) for organizing this splendid symposium, and I wish the international experts gathered here today the most profitable and meaningful of discussions.

Welcome address

Gonzalo Oviedo, World Conservation Union (IUCN), Switzerland

Professor Hans van Ginkel, Rector of the United Nations University,
Professor Hayao Kawai, Commissioner of the Japanese Agency for Cultural Affairs,
Distinguished representatives from the Government of Japan, governments from other countries and international organizations,
Distinguished colleagues and participants,

I feel honoured to have the opportunity to address the opening session of this Symposium and to bring to all participants wishes of success on behalf of IUCN, the World Conservation Union.

The institution I represent is the largest network of nature conservation organizations in the world. Created in 1948, the IUCN brings together eighty-one nation-states, 114 government agencies, more than 800 non-governmental organizations, and more than 10,000 scientists and experts from 181 countries, in a worldwide environmental partnership. Its mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature, and to ensure that any use of natural resources is equitable and ecologically and socially sustainable. With official observer status at the United Nations, IUCN is particularly skilled at reaching out to governments and civil society in search of solutions that ensure sustainable development.

The World Commission on Protected Areas (WCPA), one of the six commissions of the IUCN, is the world's leading expert body on protected area issues having offered guidance and tools for the establishment and management of protected areas worldwide. One of the expert groups within WCPA, the Task Force on Cultural and Spiritual Values of Protected Areas (CSVPA), has been actively working for the protection of sacred natural sites, jointly with the IUCN Secretariat.

More than a decade ago, IUCN proposed a definition of protected areas that included cultural resources as a criterion in the selection of areas. It also proposed an international system of categories which gave importance to cultural values, including sacredness.

In 2003, at the Fifth World Congress on Protected Areas, held in Durban, South Africa, protection of sacred natural sites became a truly important topic. The congress, a gathering of more than 3,000 world experts, produced an accord, action plan and recommendations that highlight the importance of cultural values and sacred sites; the substantial discussions held on this topic, under the initiative of CSVPA, produced valuable outputs. We will hear more about this in the forthcoming sessions.

Mr Chairman, I have been dreaming for some time about the opportunity of addressing such an important group of institutions and experts on the protection of sacred sites, an issue which is dear to me from my own experience in my home country, Ecuador. For several years I have been promoting and encouraging the creation of a major international effort to protect sacred natural sites worldwide, and have been working with many colleagues from IUCN and many other institutions concerned with achieving the same objective. We have an extraordinary opportunity here to crystallize the commitment and willingness shown by the institutions and individuals participating in this event, and to move to more decisive action while working together with the traditional owners of the sacred sites of the world.

Mr Chairman, you reminded us that one of the most salient forms of culture-based conservation has been the establishment of sacred sites, which often harbour valuable biodiversity and protect key ecosystems. As you rightly pointed out, indigenous and traditional societies created protected areas much before the advent of the Yellowstone model on

which current protected area legislation, policy and practice is based worldwide. Sacred natural sites are indeed the oldest protected areas of the planet. Yet, unfortunately, many sacred natural sites are at risk. They are subjected to many pressures and threats, external and internal, such as illegal extraction of timber and wildlife, impacts from extractive industries' operations, encroachment by outsiders, disrespectful tourism, poverty and population dynamics, degradation of neighbouring environments, and reduction of the availability of lands and resources for traditional peoples.

In other cases, sacred natural sites have been inadvertently integrated into legally declared protected areas, without recognition by government agencies of the traditional practices that have sustained them, and of the cultural significance of such places for communities living within them. This has resulted in violation of their rights and therefore mistrust and animosity, which apart from ethical considerations, creates obstacles to effective management of such sites and areas.

There is therefore an evident need for action. On the one hand, we must provide recognition and support to sacred natural sites currently facing threats, so that their traditional owners and conservation agencies can work together for their continued management and conservation. On the other hand, protected area agencies should recognize the cultural and spiritual dimension of sacred sites included within their designated boundaries, and recognize the rights of the communities concerned to continue using and managing those sacred sites as places for their cultural and spiritual realization and reverence. In both cases, effective action in support of sacred natural sites would have a large impact on enhancing biodiversity conservation, as well as on the long-term vitality of the cultures that created them.

Mr Chairman, I would like to reiterate my gratitude to the United Nations University, the Japanese Government, UNESCO, and all partner organizations for all the efforts made to organize this event. IUCN is most pleased to be associated with it. Our commitment is to conservation that meets people's needs and respects their rights, as mandated by our members at our third congress in November 2004. This includes a commitment to support culture-based conservation, and indeed the protection of sacred natural sites. I was pleased to hear your call for action, Mr Chairman, and I am delighted that this event will be discussing key steps in that direction. This will be a just response to the efforts that traditional cultures have made for millennia for the benefit of the planet and humankind.

Thank you.

Welcome address

Parshuram Tamang, member of the UN Permanent Forum on Indigenous Issues, Nepal

Mr Van Ginkel, Rector of the United Nations University,
Mr Yasuyuki Aoshima, Director of UNESCO-Beijing office,
Mr Kawai, Commissioner of the Japanese Agency for Cultural Affairs,
Mr Oviedo, representative of the World Conservative Union,
Dear friends, ladies and gentlemen,

First of all, on behalf of the United Nations Permanent Forum on Indigenous Issues, my colleague William Langeveldt, who is also present here, and myself, I would like to thank the organizers for inviting the Permanent Forum to participate in this International Symposium 'Conserving Cultural and Biological Diversity: The Role of Sacred Natural Sites and Cultural Landscapes', as part of the activities of the World Expo 2005 which is taking place in Aichi, Japan.

Being an indigenous person, coming from a mountainous country, Nepal, I had a great wish to meet with the people of Japan and especially the indigenous sisters and brothers here in Japan, an island country. As for my colleague, Mr Langeveldt, he has come a long way from South Africa to be with us. We are happy to have this opportunity to address this opening session of this important symposium.

There are roughly 370 to 500 million indigenous people living in the world, representing almost 4,500 to 5,000 diverse cultures, languages and civilisations out of about 6,000 of the world's cultures and civilizations. This world is colourful and full of diversity and richness largely because of indigenous peoples. It is unfortunate that we are facing huge challenges in today's world: political, economic and social marginalization and discrimination, even extinction, cultural loss, inequality, deprivation, displacement, ill-health, low literacy, extreme poverty and last but not least, situations of conflict.

Furthermore, in many places where our indigenous communities live, environment-related issues have become more than ever serious and crucial for us, such as access to water or pollution of the water resources of indigenous communities.

Our cosmic view of life means being connected with the environment and the world around us. Everything in the environment and planet has life and, as such, it has a sacred value. For us the earth, mountains, plains, caves, plants, animals, stones, water, air, the Moon, the Sun and the stars are sacred. Spirituality is born of this view and conception by which all beings that exist in and with Mother Nature possess life and are interrelated. Spirituality is linked to the sense of community, where beings are interconnected and interdependent in their existence. We therefore worship water sources, rivers, seas and lakes, mountains, our earth mother, not only because they are the means for our survival, but also because they are a part of ourselves, of our identity as people. We treat environments as our community members, and in many cases, mountains and water resources are sacred for us: they represent our ancestors, they are sources of our force, our spirituality and our soul.

I feel proud to say that indigenous peoples are making concrete contributions to global, cultural and biological diversity, to our planet – Mother Earth – and to the future of humanity. We are indigenous because we are conscious of the great responsibility and mission we have to Mother Earth. We are bestowed with the responsibility to maintain balance within the natural world. When any part is destroyed, all balance is thrown into chaos. When the last tree and ice cap have gone, and the last river has dried up, only then will people realize that we cannot eat gold and silver. To nurture the land is our obligation to our ancestors who have passed this to us, and for future generations.

We are happy that the international community has started to focus attention on indigenous experiences with regard to cultural and biological diversity. Indeed, our ancestors have transmitted to us from generation to generation extremely rich knowledge and experiences for the protection of our sacred sites. Our histories and our languages are a mirror of this extraordinary richness; scientists and linguists have told the whole world that each of our indigenous community has a special and intimate relationship with the nature

in which they live. You may know that there are more than 200 terms and phrases for techniques and activities in relation to seals and whales in the Inuit language. In my own Tamang culture, we also have a very complex system of terminology for mountains. I am sure that my colleague Mr Langeveldt can give you similar examples of indigenous languages and cultures in Africa.

By working together with indigenous peoples, the world should move forward to better conserve and protect our natural sacred sites and their cultural meanings. This joint symposium organized by several UN entities on the role of sacred natural sites and cultural landscape in the conservation of cultural and biological diversity is a good example of this collective effort which will benefit all of us.

As UN specialized agencies, you have been addressing issues of traditional knowledge, cultural and biological diversity in your various areas of competence. FAO has an important project on Globally Important Ingenious Agricultural Heritage Systems to strengthen the capacity of farmers and farming communities in conservation and sustainable management; UNESCO has a Convention on Intangible Cultural Heritage; and the Secretariat of the Convention on Biological Diversity, together with the contribution by indigenous peoples, has adopted the Akwé:Kon Guidelines for the conduct of impact assessment in development projects implemented on sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities. UNESCO, as the guardian of the world's cultural and natural heritage, has been working for years on protecting natural and cultural heritage by providing technical assistance in various forms. All this important and substantive work shares the same goal as indigenous peoples, which is to protect Mother Earth for future generations. In this regard, I am glad that you have engaged indigenous peoples in your work. As shown throughout history, indigenous peoples' holistic worldview has much to offer the world.

Effective participation is the key to the success of any projects undertaken in indigenous communities, whether it is on literacy, development, health or on the conservation and protection of sacred sites. In the area of development, we believe that the principle of free, prior and informed consent should be respected when it comes to projects to be implemented in an indigenous community, or those that would impact on the community. I think this is an extremely important principle to observe; it also falls within the concept of 'the human right-based approach', which the United Nations system has been implementing through its work. Following a decision by the Forum a workshop on this subject was held at the United Nations in New York in early 2005, with the participation of UN agencies, indigenous experts and governmental experts. This principle has been repeated.

With today's technologies and sophisticated methods sacred sites can be physically very well protected, but without the communities living and communicating so intimately within them, they would be void and meaningless. Yet I do not think this should be the ultimate purpose of conservation. I come from Nepal, a Himalayan country. The Himalayas represent a paradise for millions of people and nature lovers thanks to their extraordinary and unique flora and fauna, but they have a deeper meaning and spiritual weight for those people living in the region. The Himalayas would not be as it is today if we, the indigenous peoples of the Himalayas, no longer worshipped them as sacred sites and felt part of this beautiful landscape.

We are all aware that in some places, natural parks have been designated in indigenous areas. Despite the good faith to protect these areas of significant cultural and natural values, the daily life of some indigenous communities has been affected and their access to the natural resource has been restricted in the name of protection. In addition, their culture has been redefined for tourist purposes and in many cases their involvement in the management of sites has not always been satisfactory, with unfair and unequal access to benefit sharing. I therefore hope that we can tackle these issues collectively together during the deliberations of our symposium. The United Nations Permanent Forum on Indigenous Issues, as a subsidiary body established by the United Nations Economic and Social Council to advise the Council and the UN system, would be more than happy to assist you in this endeavour.

Dear friends, I am delighted to see friends and colleagues from many parts of the world here in Japan, and to have been given the opportunity to meet with our indigenous Ainu sisters and brothers of Japan. In Asia, we have the largest number of indigenous and tribal peoples. Our region is also the most diverse in terms of cultural and biological diversity: from the 'Roof of the World' to the sea in Japan, from the steps of Mongolia to the small islands of South-East Asia. As an Asian indigenous member of the United Nations Permanent Forum on Indigenous Issues attending this symposium, let me express my thanks to the organizers of the symposium for inviting me and my colleague, Mr William Langeveldt.

To conclude, I would like to quote the speech of the Secretary-General of the United Nations, Mr Kofi Annan, at the opening of the Third Session of the Permanent Forum in May 2004:

If we are to make the twenty-first century the 'age of prevention', then the rest of humanity must enter into greater and more meaningful dialogue with indigenous peoples. The motto of the First International Decade of the World's Indigenous People has been 'partnership in action'. The time has come to give more concrete meaning to those words. Cultural diversity is not a source of conflict and tension but it is a resource for expanding choices and freedom for human development by building inclusive societies – the starting point of dialogue for biological diversity: Respect for diversity is respect for life.

Thank you.

Session 1

The phenomenon of sacred mountains: traditional worship and conservation

Sacred mountains of the world: an overview

Edwin Bernbaum, Sacred Mountains Program, The Mountain Institute, USA

Introduction

As the highest and most impressive features of the landscape, mountains have an extraordinary power to evoke a sense of the sacred. Their imposing peaks, the clouds that gather about their summits, the dramatic play of light on their slopes, the waters that issue from their springs, their quiet places of solitude and contemplation: these and other characteristics combine to imbue them with an aura of mystery and sanctity. In that mystery and sanctity, people of diverse backgrounds, both traditional and modern, experience a sense of a deeper reality that gives meaning and vitality to their lives.

As sacred expressions of a deeper reality – however that may be construed – mountains have become associated with the deepest and most central aspirations and beliefs of societies, cultures and religious traditions around the world, making them cultural landscapes imbued with intangible values of the highest order. The remote Himalayan peak of Mount Kailas, rising aloof above the Tibetan Plateau, directs the minds of millions of Hindus and Buddhists toward the ultimate goals of their spiritual traditions – liberation and enlightenment. The graceful cone of Mount Fuji has come to represent the quest for beauty and harmony that lies at the heart of Japanese culture. As the loftiest mountain on earth, Mount Everest stands out, even in the modern, secular world, as an inspiring symbol of the highest efforts and attainments.

The sacredness of mountains in general manifests itself in three general ways. Firstly, certain peaks, such as Fuji and Sinai, are singled out by particular cultures and traditions as places of special sanctity directly linked to their deepest values and aspirations. These mountains – the ones traditionally known as 'sacred mountains' – have well-established networks of myths, beliefs and religious practices such as pilgrimage, meditation and sacrifice. Secondly, mountains that may or may not be revered in themselves frequently contain sacred sites and objects such as temples, monasteries, hermitages, stones, springs and groves – or are associated with the lives and activities of important holy persons. An example in Japan is Koya with its impressive cemetery and numerous Buddhist monasteries. Thirdly, mountains known for their evocative beauty, such as the Alps and Sierra Nevada, commonly awaken in individuals a sense of wonder and awe that sets them apart as special places imbued with particular beauty and meaning.

We shall examine a few examples from various parts of the world to show the diversity of ways in which people revere sacred mountains and the sites associated with them. Such reverence can provide powerful motivations for the conservation of biodiversity and of nature in general. It also supplies the underpinnings that uphold the diverse beliefs, practices and ways of life of many different traditions and societies around the world.

Reverence for mountains is commonly experienced through a great number of different views or themes. The examples we shall explore reflect some of the most important and widespread of these themes: mountains as places of power; deities or abodes of deities; earthly or celestial paradises; sources of water, life and healing; centres of local regions or the universe itself; ancestors and the other world of the dead; symbols of cultural identity; and sites of revelation, transformation and inspiration.

Mount Kailas

Mount Kailas in western Tibet is the most sacred mountain in the world for nearly a billion people in Asia, followers of at least four religions, including Buddhism, Hinduism, Jainism and Bon. Although it is almost 2000 metres lower than Mount Everest, Kailas stands out from its surroundings and is a much more impressive mountain, bearing the form of a Hindu temple or a Buddhist stupa.

For hundreds of millions of Hindus in South and South-East Asia, Kailas is the primary abode of Shiva, one of the three forms of the supreme deity. Ancient art and contemporary posters depict him in a paradise on the

summit of the sacred mountain with a woman's face on top of his head, water gushing from her mouth. She is Ganga, the goddess of India's most sacred river, the Ganges. This is a reference to a very important living myth of Hinduism, which has important environmental implications. According to the myth, an ancient sage asked the goddess to come down from heaven to fill the oceans. She liked it up there and didn't want to come down. So, as an excuse, she said that the weight of her waters falling from heaven would shatter the earth. Shiva offered to break her fall with the hair on his head, which is what happened.

Indian environmentalists have pointed out that the myth corresponds to what actually happens environmentally. The *Puranas*, ancient texts of Hindu mythology, say that the forests of the Himalaya can be viewed as Shiva's hair. During the summer, the Ganges does indeed fall from heaven in the form of monsoon rains, and when Shiva's hair is not there to break her fall – where Himalayan forests have been cut down – the earth does shatter under her impact in devastating landslides and floods (Nanda, 1990).

Tibetan Buddhists also revere Mount Kailas as the most sacred mountain in the world, but they see it as the pagoda palace of a different deity – Demchog, the One of Supreme Bliss. Tibetan *thangka* paintings show the blue figure of Demchog embracing his female consort. At a deep level, the painting symbolizes the union of the spiritual forces of masculine compassion and feminine wisdom needed to achieve the highest goal of Tibetan Buddhism – attaining enlightenment for the sake of all beings. When practitioners arouse these forces within themselves, they awaken to the true nature of reality, which is what the word 'Buddha' means – one who is awake or aware – and they acquire the ability to help others to go beyond suffering, which is the meaning of Nirvana (Bernbaum, 1998).

The pilgrimage to Kailas is one of the longest and most arduous in the world. In the past pilgrims would travel by foot and horseback for weeks and months. Even today it takes nearly two weeks of travel by vehicle across the Tibetan Plateau to reach the mountain. When the pilgrims finally get to Kailas, they don't climb it; rather they walk around the mountain, treating it with respect as they would a shrine, which it is. The circumambulation of the sacred mountain is about 50 kilometres, beginning at 4,600 metres and crossing a pass at 5,600 metres.

As one circles around the mountain, it presents its different faces. The austere north face rises nearly 2,000 metres from base to summit. According to Tibetan tradition, Tibet's most famous yogi, Milarepa, climbed the mountain in the eleventh century by flying magically to the summit in an instant, certainly the most direct and elegant ascent of a mountain in mountaineering history.

In songs of his spiritual experience, Milarepa sang of Kailas:

> The prophecy of Buddha says most truly,
> That this snow mountain is the center of the world,
> A place where the snow leopards dance.
> The mountain top, the crystal-like pagoda,
> Is the white and glistening palace of Demchog …
> This is the great place of accomplished yogis;
> Here one attains transcendent accomplishments.
> There is no place more wonderful than this,
> There is no place more marvelous than here.
>
> *(Chang, 1977, p. 1,262)*

Like Milarepa, some pilgrims today walk barefoot over snowfields and icy streams, suffering no frostbite. A few acquire even more *merti* from the circumambulation by doing the whole circuit with full-length body prostrations.

The high point of the pilgrimage is the Dolma La, the Pass of the Savioress. Each Tibetan pilgrim leaves a part of him or herself here, such as a lock of hair, symbolizing the fact that he or she has let go of attachments to the ego in order to attain enlightenment for the benefit of others.

Many Buddhists and Hindus regard Mount Kailas as the physical manifestation of Mount Meru or Sumeru, a mythical mountain at the centre of the universe that serves as a cosmic axis around which everything is organized. It is said to rise more than 80,000 kilometres to the heights of heaven and its roots go down more than 80,000 kilometres to the depths of hell. Mount Meru is said to lie to the north of our world, described as a continent floating in an ocean surrounding the cosmic axis of our universe (Bernbaum, 1998).

Badrinath

One hundred kilometres from Kailas, in northern India, rises another peak sacred to Shiva: Nilkanth, the Blue-Necked One. At its foot lies Badrinath, the most important Hindu

Fig. 1 Mount Kailas, Tibet. The most sacred mountain in the world for more than one billion people in Asia. Photo by Edwin Bernbaum

pilgrimage shrine in the Indian Himalaya. In 1993 Professor A. N. Purohit, then Director of the G. B. Pant Institute of Himalayan Environment and Development, noticed on a visit to Badrinath that all the trees had been cut down. He had the idea of going to the chief priest of the shrine and asking him if he would bless seedlings provided by the institute and encourage pilgrims and others to plant them for religious reasons. The priest became very excited, and they arranged a ceremony in which the priest cited every myth and idea concerned with the value of trees in Hinduism. He referred, in particular, to the myth of the descent of the Ganges, and told the participants that if they replanted trees (representing Shiva's hair), they would get additional blessings from the deity (Bernbaum, 1997).

The ritual initiated a series of ceremonies that

galvanized interest and support for the idea of reforestation where local people had thought it was hopeless. The G. B. Pant Institute established a high-altitude nursery to harden and acclimatize seedlings, and devised ways to protect the fragile plants from heavy snowfall in winter. A major objective of the programme is to re-establish an ancient sacred forest called 'Badrivan'. The tree-planting ceremonies have involved, in addition to pilgrims from all over India, villagers, government officials, and *pandas* or local religious guides. A key hypothesis to test over the long term is whether people will take better care of the trees knowing that they were planted as sacred objects in special rituals. The program has spread to Sikh priests and sacred sites in the region, and could be adapted to other religious and cultural traditions, including those of Buddhism and Christianity.

In 1996 I came to do research on how the programme at Badrinath might be used as a model for inspiring culturally and spiritually motivated conservation and environmental awareness. I thought I was to observe a tree-planting ceremony, but was told at the last minute that I had to give a speech along with other dignitaries. It was the most interesting group of speakers with whom I have had the honour of speaking. They included three plant physiologists, the local priest, a well-known swami from South India, the general commanding India's border forces with China, and a very important holy man, who blessed the seedlings. The latter, a Naga Baba, went around without clothes and had been holding one arm up for 40 years. Major government officials of India, including the late Prime Minister Indira Gandhi, had come to him for blessings. The Naga Baba had gone to meditate at a sacred lake at nearly 5,000 metres, and when winter arrived, he let the snow pile up around him. An army patrol came across the holy man's trident sticking out of the snow, and when they dug down, they found him meditating naked. The general attended the tree-planting ceremony partly to meet the holy man since, as he put it, somebody who could do something like that was well worth meeting.

Tai Shan

Mountains have also played an important role in the history and culture of China. According to ancient Chinese annals, back in the third millennium bce, the first, legendary emperors, went on ritual tours of the empire and climbed sacred peaks in each of its four quarters in order to establish sovereignty over the realm. This was so important that the highest official in the imperial court bore the title 'The Four Mountains' (Chavannes, 1910). The most significant of the four peaks was Tai Shan, the mountain of the eastern direction (a fifth was added later at the centre). Later historical emperors would climb Tai Shan to perform sacrifices thanking heaven and earth for their success. They would do this only if they thought they had brought their dynasties to the apogee of power and glory. Otherwise they did not dare for fear of being struck down for hubris. The last emperor who had enough confidence to perform this

Fig. 2 Badrinath, India. The major Hindu pilgrimage shrine in the Indian Himalaya
Photo by Edwin Bernbaum

ritual did so in the twelfth century, so things have been downhill for emperors of China since then. As a result, Tai Shan probably has the longest record of ascents of any mountain in the world.

A woman's cult developed on Tai Shan in the twelfth century, focused on the Temple of the Princess of Azure Clouds on the summit plateau. Today elderly women come to the temple to pray and make offerings to have grandchildren. Since having descendants is critical in Chinese society, this demonstrates another aspect of the importance of Tai Shan. In fact, the god of Tai Shan was traditionally considered the earthly representative of the Emperor of Heaven, and the deity most intimately involved in the everyday life – and death – of the Chinese people.

Many philosophers and poets have written about the mountain. For example, Du Fu, considered by many to be China's greatest poet, had this to say of his aspiration to climb Tai Shan:

Breast heaving as I climb toward the clouds,
Eyes straining to follow birds flying home,
Someday I shall reach its peerless summit,
And behold all mountains in a single glance.

(Bernbaum, 1998, p. 30)

Today many Chinese climb the mountain at night, winding up the ancient path from the city of Taian at its foot, to watch the sunrise from a rock near the summit that points toward the North Star. They come to experience a major place in their country's history and culture – and a World Heritage site. A poem written by the wife of a general in 400 CE reflects the feelings that many Chinese still feel on Tai Shan:

High rises the Eastern Peak
Soaring up to the blue sky.
Among the rocks – an empty hollow,
Secret, still, mysterious!
Uncarved, and unhewn,
Screened by nature with a roof of clouds.

Time and Seasons, what things are you,
Bringing to my life ceaseless change?
I will lodge forever in this hollow
Where springs and autumns unheeded pass.

(Waley, 1919, p. 120)

Mount Sinai

Sacred mountains also play a major role in Western culture and religion. For millions in the West, the Biblical image of God's descent in fire and cloud on Mount Sinai is *the* paradigm of man's confrontation with the awesome power and majesty of the sacred. In Judaism the mountain marks the site of the most important revelation and covenant in traditional Jewish history. The following passage from a biblical commentary used in many synagogues reveals the significance for contemporary Jews of this covenant:

The arrival at the foot of Mt. Sinai marks the beginning of Israel's spiritual history. We reach what was the kernel and core of the nation's life, the Covenant by which all the tribes were united in allegiance to One God, the Covenant by which a priest-people was created, and a Kingdom of God on earth inaugurated among the children of men.

(Hertz, 1961, p. 290)

The Bible provides a vivid picture of what transpired on the sacred mountain.

And it came to pass on the third day, when it was morning, that there were thunders and lightnings, and a thick cloud upon the mount, and the voice of a horn exceeding loud; and all the people that were in the camp trembled. And Moses brought forth the people out of the camp to meet God; and they stood at the nether part of the mount. Now mount Sinai was altogether on a smoke, because the Lord descended upon it in fire; and the smoke thereof ascended as the smoke of a furnace, and the whole mount quaked greatly. And when the voice of the horn waxed louder and louder, Moses spoke, and God answered him by a voice.
And the Lord came down upon mount Sinai, to the top of the Mount: and the Lord called Moses to the top of the mount; and Moses went up.

(Exod. 19: 16–20)

Whether or not this actually happened, the story of Moses' ascent of Mount Sinai has had an enormous impact on Western history and civilization. The Ten Commandments that he was supposed to have brought down from the mountain form the basis for much of Western law and ethics. In fact, I would say that the most famous and influential climber in Western history is not Sir Edmund Hillary, who made the first ascent of Mount Everest, but Moses. We often think that the Western approach to mountain climbing is conquering the mountain, but here, in something basic to Western thought, there is no idea of conquest: Moses climbs Mount Sinai in response to a call in order to receive something of benefit for others. The summit is the meeting place of the human and the divine.

For all its emphasis on what happened on Mount Sinai, the Bible leaves no clear indication of what the mountain looks like or where it lies. As a result, various religious traditions and scholarly conjectures have sprung up, each proposing its own candidate for the sacred mountain. Judaism itself showed little interest in the question since according to Jewish tradition the spiritual essence of Mount

Sinai – the encounter with the presence of God – was carried in the ark of the covenant to Jerusalem and transferred to the Temple Mount, which became the Jewish place of pilgrimage.

Starting in the second century, Christian hermits sought out the actual spot where Moses had been transfigured in the presence of God so that they might share in his transformative experience of light. They settled on Jebel Musa, the mountain of Moses, as the place, and in the sixth century they asked the Emperor of Byzantium to build the Monastery of St Catherine, one of the oldest in the world. It was constructed, according to Christian tradition, on the site of the burning bush at the foot of Mount Sinai, where Moses received his first call: to bring the Hebrew people out of Egypt.

On a visit to the mountain in the mid-1990s, I met with the Greek Orthodox Abbot of St Catherine's. He was concerned about the impact of tourism on the environment and the practice of religion. In the late 1980s the Egyptian government announced plans to build a *teleferique* up Mount Sinai and to put a casino on the summit. When word of the scheme got out in 1990, people from all over the world expressed outrage at what they considered crass exploitation and desecration of a mountain that functions as a prime place of revelation and symbol of ethical values in Judaism, Christianity and Islam. *Time* magazine published an essay by Lance Murrow titled 'Trashing Mount Sinai', which decried the proposed development and ended with the following comment: 'Perhaps they will make the cable cars in the shape of calves and gild them. The golden calves can slide up and down Mount Sinai and show God who won' (*Time*, 19 March 1990, p. 92). The public outcry forced the Egyptian government to abandon the idea. There was, however, an example of culturally appropriate tourist development just down the valley from the monastery: a hotel for tourists was constructed on the traditional site of the making of the Golden Calf.

Partnership project with national parks

Drawing on many of the above views of sacred mountains, The Mountain Institute (TMI) has been working with the US National Park Service (USNPS) to develop innovative interpretive and educational materials and activities that highlight the evocative spiritual and cultural meanings of natural features of mountain environments – ranging from peaks and rivers to forests and wildlife – in American, Native American, Native Hawaiian and other cultures around the world. The purpose of the project is to connect a broad range of visitors with nature, enrich their experiences, and give them deep-seated, sustainable reasons for conserving the environment. In addition to reaching the general public, the project helps diversify the National Park Service's limited visitor base by connecting with the heritages and backgrounds of cultural and ethnic groups who have not visited national parks in high numbers, such as African-Americans and Latinos.

With more than 400 million visits a year from around the country and the world, US National Parks provide ideal high-visibility, high-impact platforms for reaching diverse sectors of the public with messages grounded in spiritual and cultural values that motivate enduring conservation, and for reaching other parks and protected areas with models that inspire them to create similar products suited to their particular needs and resources. It would be difficult to find other sites with such a vast audience and such great multiplier effects. TMI's project with National Parks has the potential to enrich the experiences of millions of people and give them a deeper understanding and appreciation of nature and of other cultures. Efforts to conserve biological and cultural diversity need such an understanding and appreciation to gain the local and public support required to be sustainable over the long term. The strength and uniqueness of this approach lies in its inclusiveness: in the way in which it encourages multiple perspectives so that everyone feels included and no one feels left out. This makes interpretive materials and exhibits focused on indigenous Native American, Alaskan and Hawaiian traditions and issues much more effective: people feel more inclined to appreciate and support others' views if they feel their own are being acknowledged and respected.

In dealing with traditional sacred sites on park lands, the preferences of the indigenous peoples who revere them take first priority, so interpretive materials present only what they want to reveal about these sites and the beliefs and practices connected with them. The involvement of representatives of these groups, as well as other stakeholders, from the beginning is key. A major purpose of the project is to highlight the importance of park resources to indigenous peoples today, engendering understanding of and respect for their traditions. We encourage the development of interpretive materials and activities which draw wherever possible on the voices of living representatives of these traditions. Too many waysides and exhibits in too many parks and protected areas refer to indigenous peoples in the past tense, leading visitors to believe that they no longer exist or no longer have connections with the land.

The following is a sampling of a few products from the project focused on matters of particular concern to indigenous peoples in the Parks.

A collaboration among Great Smoky Mountains National Park, the Eastern Band of the Cherokee, the Museum of the Cherokee Indian and TMI uses wayside exhibits and a booklet to link Cherokee spiritual and cultural traditions and stories to features of the natural landscape – such as buzzards, trees, a mountain and the river itself – along the two-kilometre Oconalufter River Trail which runs into the Qualla Boundary (the tribal lands of the

Eastern Band of Cherokee). The waysides are in English and Cherokee, and are illustrated with artwork by local Cherokee artists. Since many Cherokees, both adults and schoolchildren, walk the trail for exercise, the signs provide an opportunity to pass on their traditions to the younger generation and reinforce the teaching of the Cherokee language in schools. The project also enables the Eastern Band to reach the wider public through park interpretive materials. Two additional waysides on Clingman's Dome, the highest mountain in the Park, tell the Cherokee creation story of the mountains and valleys, and relate Cherokee traditions of Clingman's Dome as a sacred place of healing and a sanctuary that enabled some of the Cherokees to escape the forced removal to Oklahoma on the Trail of Tears. The Eastern Band and the Park are especially excited about this project as a model for other Tribes and protected areas.

Another broad-ranging component of TMI's project came out of meetings with the Kupuna Committee of Native Hawaiian elders advising the Hawaii Volcanoes National Park on cultural matters. It advances a mutual interest in emphasizing the importance of Native Hawaiian views of park resources. As a result of collaboration with TMI's Sacred Mountains Program, a call for proposals went out for submissions of traditional Hawaiian paintings of Pele to replace a non-traditional painting of the volcano goddess in the Kilauea Visitor Center. The main newspapers in Hawaii, based in Honolulu, ran front-page articles on the project. Park interpreters realized they had touched a nerve when they learned that all the art stores on the Big Island of Hawaii were sold out of supplies. Interest was so high that the Park was overwhelmed with a 'tsunami' of submissions – 140 in all – and the Kupuna Committee selected a Pele painting by a local artist for display in a prominent spot in the Kilauea Visitor Center. The Volcano Art Center, the Volcano House, and the Jaeger Geology Museum hosted a month-long exhibit of sixty-two of the paintings submitted (as many as could be accommodated) entitled 'Visions of Pele'.

A similar call went out for proposals for a major work of sculpture highlighting the significance of the two volcanoes, Mauna Loa and Kilauea, in relation to Native Hawaiian conceptions of *wahi kapu* or sacred places. The Kupuna Committee selected a winning design from among three finalists, and the completed sculpture will be placed in a prominent place near the entrance to the visitor centre. An important by-product of the project has been the formation of a committee of Native Hawaiian members of the interpretive staff to act as a liaison with the Kupuna Committee, and to work closely with the park and to make sure that Native Hawaiians have input from the beginning in all future interpretive projects.

Conclusion

As the examples above demonstrate, sacred mountains and the sacred sites associated with them have importance for a wide variety of people and groups, ranging from small to large. Many are important only to local communities or indigenous peoples. Others have regional, national or even international importance. They may be revered by the people of an entire nation, or by a major religious tradition with adherents around the world, such as Christianity, Judaism and Buddhism. Similarly the caretakers and custodians may be local, or they may come from far away or belong to a religious order responsible for many different shrines. Efforts to conserve the biological and cultural diversity associated with sacred natural sites in mountains need to take into account all the diverse stakeholders who revere and care for them.

References and further reading

Bernbaum, E. 1997. *Pilgrimage and Conservation in the Himalayas: A Model for Environmental Action based on Cultural and Spiritual Values.* Project report available from The Mountain Institute, Franklin, WV, USA.

Bernbaum, E. 1998. *Sacred Mountains of the World.* Berkeley and Los Angeles, University of California Press.

Chang, G. (trans.). 1977. *The Hundred Thousand Songs of Milarepa.* 2 vols. Boston, Shambhala Publications.

Chavannes, E. 1910. *Le T'ai Chan: essai de monographie d'un culte Chinois*, Paris, Ernest Leroux. (In French.)

Hertz, J. H. (ed.) 1961. *The Pentateuch and Haftorahs*, 2nd edn. London: Soncino Press.

Nanda, N. 1990. Who is destroying the Himalayan forests? N. K. Rusomji and C. Ramble (Eds.), *Himalayan Environment and Culture*. Shimla and New Delhi, Indian Institute of Advanced Study and Indus Publishing, pp. 48–60.

Waley, A. (trans.). 1919. *A Hundred and Seventy Chinese Poems*. New York, Alfred A. Knopf.

Fig. 3 Pele, Hawai'i. Painting of the Hawaiian volcano goddess selected for the Kilauea Visitor Center. Painting by Arthur Johnsen

Sacred sites and pilgrimage routes in the Kii mountain range

Makoto Motonaka, Japanese Agency for Cultural Affairs, Japan

Introduction

In Japan, a view of nature worship which holds that deities dwell in natural objects throughout the universe has been at the foundation of religious beliefs since ancient times. In this view, mountains, islands, forests, trees, ponds, swamps and other such elements of nature are considered to be sacred objects or places where deities dwell; rivers and seas are viewed as holy entrances which lead to paradise.

Among these sacred places, mountains have been closely associated with the world after death, and there is a belief that the soul of a dead person climbs a mountain on its way up to heaven. At the same time, mountains have been believed to be divine homes where the gods of wealth, agriculture and/or hunting dwell, probably because they are the places closest to heaven – places to which the gods could easily descend.

After Buddhism was introduced to Japan from China in the sixth century, mountains came to symbolize not only the world after death but also the land of rebirth called *Saiho Jodo* (Western pure land), where devout Buddhists found salvation and were reborn. In the Shugen sect of Buddhist-Shinto asceticism, priests stay away from the secular world and retreat to mountain hermitages where they pursue severe spiritual training to acquire superhuman spiritual power. That religious practice was based on the view of mountains as sacred places of the gods.

As Japanese traditions of nature worship merged with the Buddhism that was introduced from the continent, more and more mountains came to be revered as objects of worship. In this way, mountains have played a significant role in the formation of a Japanese view of nature, which is characterized by unique approaches to nature and its integration into various sociocultural contexts.

This paper introduces the Japanese sacred mountains, and in particular the sacred sites and pilgrimage routes in the Kii mountain range, which were inscribed on the World Heritage List as a cultural landscape in 2004, based upon the World Heritage nomination dossier that was submitted by the Government of Japan prior to its inscription and the recommendations made by the World Heritage Committee at the time of its inscription.

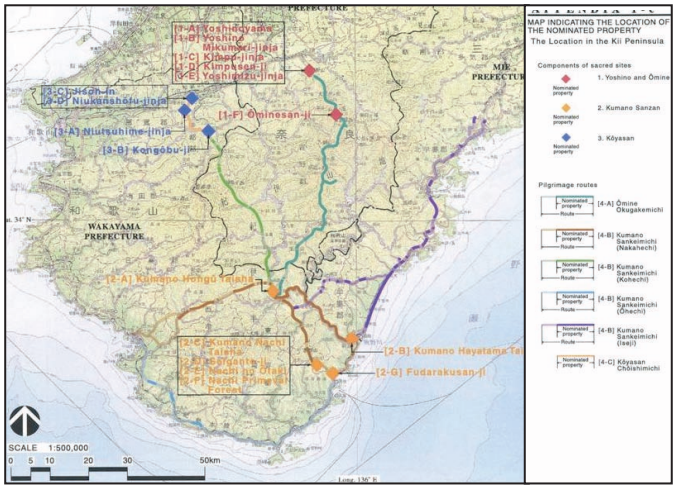
History

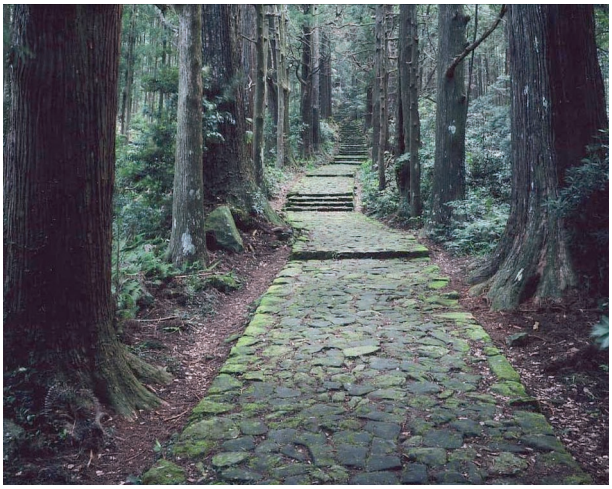
In the southernmost part of the mainland of Japan lies the Kii peninsula, jutting out to the south into the Pacific Ocean. Most of the peninsula is a forested area known as the Kii mountain range, where mountain ridges reaching an altitude of 1,000 to 1,200 metres run in all directions, and where rich, dense forests grow, nurtured by the abundant water supply from an annual precipitation which exceeds 3,000 mm.

Since ancient times, the Kii mountain range has nurtured the spirit of nature worship, in which mountains, rocks, forests, trees, rivers and waterfalls are deified and revered as objects of worship. Located to the south of the Nara basin, site of one of Japan's ancient capitals, this region came to be revered by people in the capital as well, recognized as a sacred place where gods descend and reside.

With such a background, after Buddhism was introduced into Japan in the sixth century and became a religion for national peace and stability in the latter half of the seventh century, the Kii mountain range became the central place for Buddhist ascetic practice. The Shingon sect of esoteric Buddhism, which was introduced in the ninth century, also established itself, choosing this area as the place for its ascetic practices.

From the mid-tenth century to the eleventh century, the Shugen sect of ascetic Buddhism was established as an indigenous religion of Japan, combining elements of pre-Buddhist mountain worship, esoteric Buddhism called Mikkyo and Taoist beliefs in immortal Hsien, which was introduced from China. The goal of the Shugen sect was to attain supernatural abilities through ascetic practices in the mountains, and the followers of this sect chose the Kii





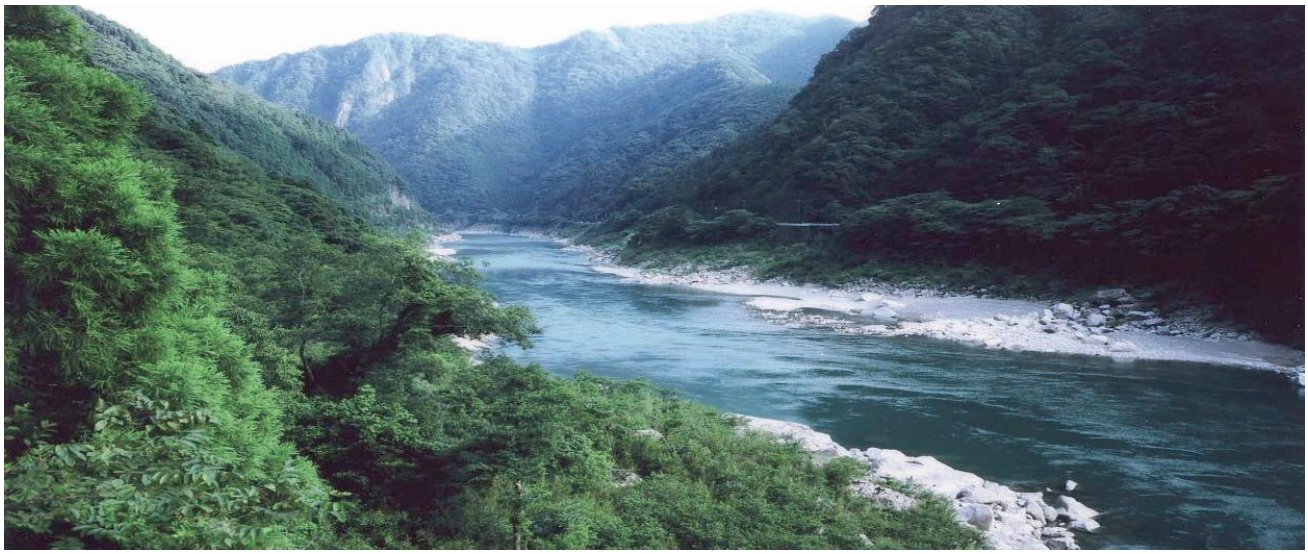


Fig. 1 A map of sacred sites and pilgrimage routes in the Kii mountain range [above left]

Fig. 2 Pilgrimage route (stone pavement and steps) [above right]

Fig. 3 Kumano river, a natural element of the pilgrimage route [middle]

Fig. 4 Shichirimihama coastal area, a natural element of the pilgrimage route [below left]

Fig. 5 Omine-okugake-michi, the pilgrimage route for ascetic practices [below right]

mountain range, especially the Omine Mountains, as the principal site for their practices.

During the ninth and tenth centuries, as the influence of Buddhism was growing stronger, the Shinto-Buddhist syncretism, or the unique belief that Japanese traditional gods are the incarnations of Buddhist deities, spread widely and the Kii mountain range attracted increased attention as the sacred place for this religious movement.

Meanwhile, in the tenth and eleventh centuries, as an extension of Buddhist eschatological thought in which it was believed that the Buddha's divine powers were to decline and became prevalent, the belief in 'Jodo' (literally, pure land), which is the Pure Land of Amida (Amitabha) where dead people can be reborn, was widely accepted by aristocrats and also by the general public. At that time, people came to believe that the Kii mountain range, located to the south of the ancient capital, was the Pure Land where Buddhist deities reside, further consolidating the status of this region as a sacred site. The desperate search for the paradise did not stop at the mountain range, and before long it came to be believed that further to the south beyond the mountains and the sea was the Buddhist paradise called Fudaraku Jodo, where Kannon-Bosatsu (Avalokitesvara) resides. Such was the seriousness with which people clung to this notion that some Buddhist priests went so far as to take out a boat from the Kii peninsula toward the southern sea, dreaming of reaching the paradise by sea. The sacredness of this region, which has developed in close association with the Buddhist concept of the pure land, can reasonably be ascribed to the unique geographical features of the region characterized by the dense mountains overlooking the southern sea and the strong contrast between the two distinct landscapes.

On the strength of the diversity of religious beliefs and activities that have been nurtured by the region's unique geographical features, climate and vegetation, the three outstanding sacred sites of 'Yoshino and Omine', 'Kumano Sanzan' and 'Koyasan', and the pilgrimage routes linking them, have developed as important heritage areas in the Kii mountain range.

'Yoshino and Omine' is the northernmost of the three sacred sites. In the Yoshino area of the Kimpu mountains, which were believed to control the water supply and were therefore closely associated with agricultural activities, and which produced gold and other minerals, were revered as major objects of worship. On the other hand, the Omine area, which is located to the south of the Yoshino area, has developed as a primary stage for mountain ascetic practices. This sacred site continued to expand in importance as the central place of Shugen ascetic practices until the mid-tenth century.

'Kumano Sanzan' is located in the south-eastern part of the Kii mountain range. In this area there are three Shinto shrines, Kumano Hongu Taisha, Kumano Hayatama Taisha and Kumano Nachi Taisha, located 20 to 40 km apart, and two Buddhist temples, Seiganto-ji and Fudarakusan-ji. Originally, each of the three Shinto shrines had its own distinctive form of nature worship; later in the late tenth century, they started to give worship to all three guardian deities at the same time under the influences of Buddhism. Since then, the sacred site came to be revered as the dwelling place of the trine deities of Kumano, whose power was believed to be the strongest in Japan. Seiganto-ji and Fudarakusan-ji were constructed in close relation to Kumano Nachi Taisha, as the fusion between Shintoism and Buddhism deepened. Fudarakusan-ji was famous in association with the Buddhist priests' martyrdom by setting sail for the Fudaraku Pure Land that they believed to exist in the southern sea. Kumano Sanzan became a pilgrimage destination in the eleventh century, as pilgrimage parties of members of the imperial family and aristocrats visited the site frequently under the guidance of Shugen ascetics. By the late fifteenth century, the majority of pilgrims who visited the site were commoners. Such was the enthusiasm of the faithful pilgrims swarming to the sacred site that people later referred to the pilgrimages to Kumano Sanzan as 'ant processions'.

'Koyasan', located approximately 30 km to the west-southwest of Yoshino and Omine, is the sacred site closely associated with the Buddhist temple Kongobu-ji. The temple was founded in 816 by the high priest Kukai (774–835), as the stage for mountain ascetic practices for the Shingon sect of esoteric Buddhism, which he introduced to Japan from China. Kukai is one of the most famous high priests of Buddhism in the history of Japan, and Kongobu-ji is still an object of worship for contemporary admirers of the priest.

As the three sacred sites drew more and more religious attention and worship, the number of people who underwent ascetic practices there or who visited them for pilgrimage increased, leading to the construction of three pilgrimage routes: the Omine Okugakemichi, the Kumano Sankeimichi and the Koyasan Choishimichi.

As has been stated above, the sacred sites in the Kii mountain range consist of the three areas: Yoshino and Omine, the religious centre of the ascetic Shugen sect; Kumano Sanzan, the religious centre for the worshippers of Kumano deities; and Koyasan, the fundamental religious base for the esoteric Shingon sect. Together with the pilgrimage routes connecting them, these three sacred sites have attracted worship from innumerable people over the past 1,000 years, and as such have played an important role as an active stage for spiritual and cultural development and interchange in Japan.

Natural elements that make up the sacred mountains

In addition to many tangible cultural elements such as the buildings and compounds of the temples and shrines, many

types of natural tangible elements associated with religious beliefs and activities exist on the site. Some of them are distinctive natural objects and areas referred to below, including deep evergreen forests which cover the temple and shrine compounds, and sacred rocks and natural forests located on both sides of the pilgrimage routes. These sites where aesthetic practices are performed form outstanding cultural landscapes associated with a powerful sacredness.

Cherry trees in Yoshino-yama

Along the ridge line of the Yoshinoyama mountainous area, extending over 7 km in length, there are Shinto shrines, temples of the Shugen sect of Buddhism, shops and hospices for the accommodation of pilgrims. Surrounding them are vast stretches of cherry trees, which were planted following the legend that En-no-Gyoja carved the principal object of worship out of a cherry tree. Since the tenth century, this has been a symbolic place renowned for the beauty of its cherry blossoms, illustrating the typical aesthetic values of the Japanese people.

Nachi waterfall and Nachi primeval forest

The Nachi waterfall, which is 133 m high and 13 m wide, is the largest waterfall in Japan taking its water source in the forests of the Nachi Mountains. The waterfall is the religious origin for Kumano Nachi Taisha and Seiganto-ji, and still is the primary object of worship.

The Nachi primeval forest is a broadleaf evergreen forest extending over some 32 ha to the east of Nachi waterfall. It retains the key characteristics of primitive forest in the Kumano region, with a mixture of plants and animals unique to both cool and warm regions. This forest has been protected since ancient times as the sanctuary of Kumano Nachi Taisha, where common entry and tree cutting were prohibited.

Koya-san Oku-no-in area

In the Koya-san sacred site there stands Kongobu-ji temple, which was founded in 816 in an alpine basin at an altitude of 800 m. This area has been the religious centre of Koya-san ever since the high priest Kukai founded his temple as a place for aesthetic practices in the mountains.

The Oku-no-in area is 3 km to the east of his temple, and contains the place where Kukai decided to set aside a grave site for himself. Revered as the sacred area where Kukai, having attained his Buddhist enlightenment in his lifetime, is still alive, it holds many large stone stupas constructed by influential feudal lords, and tombstones of people who admired Kukai's teachings during various times throughout history. In this area the 300,000 or so stone structures, large and small, are densely distributed. With giant trees as old as 500 years, which have been maintained through efforts to protect the cemetery including its surrounding landscape, this is an especially profound cultural landscape.

Omine Okugakemichi pilgrimage route

The pilgrimage route Omine Okugakemichi connects the sacred sites Yoshino and Omine in the north and Kumano Sanzan in the south. This is a stage of ascetic practices for Buddhist priests, starting from Yoshinoyama and reaching Kumano Hongu Taisha via the Ominesan-ji temple and Tamaki-jinja shrine, a total distance of about 80 km. Most of the route passes along severe, undulating mountain ridges between 1,000 m and 2,000 m above sea level, with many places for ascetic practices. In addition there are natural forests along the road, such as the Bukkyo-ga-take primeval forest and Oyamarenge native growth.

The Bukkyo-ga-take primeval forest is a natural forest of Veitch's silver fir trees *Abies veitchii*, which extends along the mountain ridges over a distance of about 3 km, including Mount Bukkyo-ga-take, the highest mountain in the Omine Mountains (1,914.9 m). Silver firs *Abies veitchii* are the representative species of evergreen coniferous trees as seen in the subalpine area of the Kii mountain range. Out of the vast expanse of the forest, an area of approximately 19 ha is designated as a Natural Monument. Because it has been prohibited to cut trees along the pilgrimage routes since at least as far back as the late fifteenth century as a measure to prevent disturbance to the setting for aesthetic practices, the natural forest adjoining the Omine Okugakemichi has been preserved in a good condition as a cultural landscape associated with religious activities along the route.

The Oyamarenge native growth is a habitat of Oyamarenge *Magnolia sieboldii*, which is a plant species of deciduous shrubs. The Japanese common name of the plant, Oyamarenge, means 'lotus-resembling flowers that bloom in Omine'; the plant is treasured by ascetics as 'flowers of celestial nymphs' because its beautiful flowers flourish at the beginning of the summer, keeping time with the opening of the sacred site Omine for ascetic practices. Large stands of the plant can be seen in the forest beds and forest edges of the silver fir forests, including the Bukkyo-ga-take primeval forest. Approximately 108 ha of its habitat is designated as a Natural Monument.

Kumano-sankei-michi pilgrimage route

The sacred site of Kumano Sanzan is located in the south-eastern part of the Kii peninsula, which is remote from Kyoto, the capital of Japan at that time, and was difficult to reach from other places in Japan. This gave rise to several routes starting from different places. The pilgrimage routes that lead to Kumano Sanzan can be geographically categorized into three subroutes, including natural geographical elements such as the Kumano river and the Shichiri-mihama coastal area. The Kumano river has a basin of 2,360 km running from its source in the northern part of

the Kii mountain range over a distance of 183 km to flow into the sea to the south. The part included in the World Heritage Site is the 40 km portion between Kumano Hongu Taisha in the middle reaches and Kumano Hayatama Taisha at the river mouth. When people took the pilgrimage route to Kumano Sanzan, they most often used ship transportation on their way to and from Kumano Sanzan. This is a precious and peerless example of a pilgrimage route on the river. Surrounded by mountains overlooking both riverbanks and spotted with singularly shaped rocks, which were later named after their distinctive shapes, the Kumano river is a long linear cultural landscape representing Kumano.

The Shichirimihama coastal area is a flat sand and gravel coast which has served as an integral part of the pilgrimage route and where pilgrims would walk on the beach to Kumano Hayatama Taisha. The magnificent landscape formed by the arc of the coastline, curving over a stretch of 22 km, has been treasured and maintained as the best scenic spot of the pilgrimage route, and is in a fair condition of conservation.

Hana-no-Iwaya is located on the seacoast of the Shichirimihama. According to legend, it marks the location of the graveyard of Izanami no Mikoto, the deity who created Japan in the myth of Japanese origin. As such, the shrine has been worshipped from generation to generation. The chief object of worship is a gigantic rock as high as 45 m, reminding the viewer of the ancient style of worship at a time when there were no religious constructions for enshrining deities or giving prayers, as can be seen in contemporary shrines. An annual event, 'Hana no Iwaya no Otsunakakeshinji', is still observed in February and October in relation to the Hana no Iwaya, a festival retaining the content of ancient rites described in the myth of Japan.

'Kumano no Oniga-jo including the Shishiiwa' is a natural scenic spot characterized by the unique shapes of geological features that are works of nature's art produced through interactions between quartz trachyte cliffs and the weathering processes of waves and winds. The Kumano no Oniga-jo is a series of terraced caves and the Shishiiwa is a lion-shaped rock. These scenic spots on the Shichirimihama coastal area are the components of the cultural landscapes along the pilgrimage route that many pilgrims can enjoy.

Intangible elements

Intangible elements, religious activities and traditional festivals held in the temples and shrine compounds are not strict components of the World Heritage Site. On the other hand, it is important to pay due attention to intangible elements, back-to-back with tangible elements. They include religious rites and distinctive lifestyles, customs and habits that reflect how the spiritual world is related to people's daily lives. In so doing, it is also important to clarify with which tangible element each of the relevant intangible elements is associated.

Authenticity and integrity

The cultural landscape related to the Kii mountain range contains various types of sacred places which have historically been revered as of extremely high divine influence, ranging from religious structures such as groups of historic buildings in the compounds of temples and shrines and stone stupas, to natural places and objects, such as mountains covered by deep evergreen forests or formidable rocks, singular rocks exposed on the mountain body, waterfalls with exceptionally heavy torrents of water and gigantic old-growth trees. In addition, another type of sacred place comprising the pilgrimage routes include the rivers and the religious remains still standing alongside them. At these sacred places, various religious rituals and practices, mainly related to Shintoism, Buddhism and Shugendo (the shugendo sect), have been carried out continually; they remain the active stages for those activities today. These sacred places retain an extremely high degree of authenticity, in terms of not only tangible elements but also such intangible elements as are represented by the religious activities.

Furthermore, the vast natural mountain environment nurturing the property contains primeval forest and is the habitat for various unique, naturally occurring species of animals and plants that are designated as Natural Monuments, and Natural Places of Scenic Beauty. This is exemplified by the view of blankets of cherry trees covering rows of mountains, which have been sources of artistic and aesthetic inspiration to many poets and painters in Japan since early times. The authenticity of their unique characteristics and components is extremely high.

As is stated above, the elements of cultural landscapes included in the World Heritage Site cover a wide range of values from the cultural to the natural; because they remain in a 'balanced state of ecological systems, aesthetic, cultural, religious or artistic associations (as is stated in paragraph 2.5.2 of the Conclusion and Recommendations made by the Thematic Expert Meeting on Sacred Mountains in the Asia-Pacific region, Japan, 2001), the integrity of the cultural landscapes meets the required standards.

On the other hand, the Kii mountain range has a history of active commercial forestry, which has nurtured the Japanese cedar trees and cypress trees covering a large part of the existing forests that extend along the pilgrimage routes and rivers. This forestry industry has been sustained for a long period of time as one of the important local industries that economically support the sacred mountains. In addition, the landscapes of these plantations are the essential components of the cultural landscapes of the sacred mountains, along with the pilgrimage routes and

rivers. Those areas are included in the buffer zone for the World Heritage Site, and appropriate conservation measures have been and will continuously be taken, ensuring that in the entire area of the buffer zones, in unity with the World Heritage Site itself, the integrity of the cultural landscapes will be sufficiently preserved.

Application of the cultural criteria for inscription on the World Heritage List, and future recommendations made by the World Heritage Committee

At the time of the inscription of the site on the World Heritage List, the Committee indicated the application of cultural criteria for its inscription of the site, and adopted future recommendations for desirable conservation measures by the Government of Japan.

Application of cultural criteria for inscription

Criterion ii: The monuments and sites that form the cultural landscape of the Kii Mountains are a unique fusion between Shintoism and Buddhism that illustrates the interchange and development of religious cultures in East Asia.
Criterion iii: The Shinto shrines and Buddhist temples in the Kii Mountains, and their associated rituals, bear exceptional testimony to the development in Japan of religious culture over more than a thousand years.
Criterion iv: The Kii Mountains have become the setting for the creation of unique forms of shrine and temple buildings which have had a profound influence on the building of temples and shrines elsewhere in Japan.
Criterion vi: Together, the sites and the forest landscape of the Kii Mountains reflect a persistent and extraordinarily well-documented tradition of sacred mountains over the past 1,200 years.

Future recommendations

Three recommendations for the future development were made by the World Heritage Committee as set out below.

The Committee:

1. Recommends that the State Party undertake an inventory of the key elements of the site over the next five years in order to inform management. This should include an analysis of the wooded mountain landscape.
2. Further recommends that the State Party give consideration to setting up a coordinating body to oversee the management of the site and perhaps appoint an overall coordinator.
3. Requests the authorities to develop a more detailed management plan and medium-term strategy to address the sustainable management of both the natural and cultural aspects of the site. Such a plan might consider the appropriate placement of overhead wires and visitor facilities. This plan should be submitted to the World Heritage Centre by 1 February 2006 for examination by the Committee at its 30th session in 2006.

Conclusion

The sacred mountains in Japan, which are cultural landscapes borne out of the nature worship traditions of ancient Japan, have played significant roles under the influences of Buddhism, or the Shugen sect of Buddhist-Shinto asceticism, in the formation of the spiritual world of Japanese society. They have also been a bountiful resource for folklore and works of art.

Because the cultural landscape of a sacred mountain consists of various types of components, ranging from the natural setting of the mountain itself to the associated cultural elements, which are physically and/or spiritually interrelated with each other in a very complex manner, several difficulties or problems inevitably accompany their evaluation, preservation and management.

This paper has made some remarks about the evaluation and management of sacred mountains as cultural landscapes through the introduction of 'Sacred Sites and Pilgrimage Routes in the Kii Mountain Range' which was inscribed on the World Heritage List in 2004.

The Cardinal Direction Markers Project: sharing the creation of earth

Cynthia Orlando, Hawaii Volcanoes National Park, USA

Summary

The significance of Hawaii Volcanoes National Park as a World Heritage Site and UNESCO Biosphere Reserve is defined by its cultural landscape.
The park has also incorporated the rights of indigenous people and traditional knowledge into its management strategies, in some cases through special legislation.

Stewardship of the park also recognizes the cultural diversity of the landscape and its contribution to the conservation of its biological diversity. It serves as a refuge for the Hawaiian culture by allowing rights of access, through consultation, and by seamlessly managing the tangible and intangible. We recognize that Native Hawaiians are custodians of this sacred place and worship the nature represented within the park. Because the land serves as a metaphor for the culture, the culture helps us to understand what it is we truly need to protect. The authority under which we do so is set forth in National Park Service Management policies that outline consulting relationships.

Native Hawaiians have lived in sustainable ways in this environment for hundreds of years.
With their wisdom and guidance, the following case study represents a wonderful example of indigenous people from throughout the world working together within the boundaries of Hawaii Volcanoes National Park.

Introduction

Those who first enter the Hawaii Volcanoes National Park find themselves in awe of the dramatic scenery, and their senses are awakened by the smell of sulphur, sounds of forests alive with native songbirds and steaming lunar-like surfaces. The park's 330,000 acres represents the twelfth United States National Park established, and it protects the

Fig. 1 Hula Performance at Kilauea Caldera (HVNP) [left page, above left]

Fig. 2 Royal Court Investiture Aloha Festival, Halemaʻumaʻu Crater [left page, above right]

Fig. 3 A sacred traditional area for Native Hawaiian Culture and Practitioner [left page, below]

Fig. 4 Surface lava flowing creating 2 new caves, Kilauea Volcano world's most continuously active volcano [this page, above left]

Figs. 5 and 6 Both pictures are part of the Royal Court Investiture, Halemaʻumaʻu Crater [above right and middle]

Fig. 7 Pele, Goddess of Volcano [below]

summits and rift zones of two of the world's most active volcanoes, Kilauea and Mauna Loa. But more than just the dunes, tropical rain forests, blackened lava and endangered species and ecosystem, the park is a spiritual reservoir for native Hawaiians, and a last vestige of Hawaii as it was hundreds of years ago.

As the manager of this sacred natural area, my *kuleana*, or responsibility, is to recognize and communicate the vital connections that the island's first people have to this sacred site and to provide a sanctuary for the host culture. Today we manage to reconcile Hawaii's past with her future and protect the living native culture in many different ways: through the expression of chant and dance on the edge of Halema'uma'u Crater; by providing rights of access; by protecting and preserving the cultural and historic scene. Our *kupuna*, or elders, help us to appropriately communicate those values and the intangible spirit of the people of this land.

This paper will discuss the role of the Kupuna Consultation Group and their spiritual guardian Pele, goddess of the volcano, as we collaborated with the Smithsonian National Museum for the American Indian on the Cardinal Direction Markers Project, an effort to remind the country and the world that the culture of Hawaii is very much alive.

Project history

The resources of Hawaii Volcanoes National Park demonstrate the powerful and awe-inspiring volcanic forces that create new land, and the unique adaptations of plants, animals and people to that land. *Kupuna*, respected Hawaiian elders, teach '*malama o ka'aina*: care for the land and the land will care for you'. Today we protect the integrity of the park and the culture of Hawaii's indigenous people by leaving everything in its rightful place. At Kilauea and on Mauna Loa the ground is very sacred to the Hawaiian people. Hawaiian culture views people as stewards of the land and ocean which sustain all life. Yet with the courage and insight of our *kupuna* we were able to extend that stewardship to the world.

Volcanoes, and the lava and ash that erupt from the earth, 'have their own language and mesmerizing beauty'. Pele is volcanism in all its forms. The molten lava represents her birth, the craters her home. As Pele creates new land she shares the birth with us. When we were approached by the Smithsonian National Museum for the American Indian to share a *pohaku*, or stone, that would represent the indigenous people of Hawaii, the National Park Service consulted with our *kupuna* and they agreed. Though other Native Hawaiian communities had been asked to participate they had declined. The *kupuna* agreed to collaborate for the benefit and recognition of Native Hawaiian peoples, considering the *pohaku* an ambassador on their behalf.

Pele, the sacred living deity of Hawaii's volcanoes, controls the limitless power of creation through her perseverance, molten strength, and unearthly beauty. Her passion emanates from her ancient existence. Revered and honored as the fire goddess she is my spiritual guardian and forever the heartbeat of my soul, continuously giving life to her land and its people.

The Cardinal Direction Markers project is an outdoor exhibit of stones representing the four cardinal directions of north, south, east and west. They are placed outside on the grounds of the museum, exposed to the elements and people. They intersect at the center of the Potomac area of the museum building, linking the four directions to the circle of pipestone that marks the figurative heart of the museum. The stones were acquired from the extremities of the western hemisphere in collaboration with their native source communities: Hawaii (western stone), Northwest Territories, Canada (northern stone), Mid-Atlantic Region (eastern stone) and Tierra del Fuego, Chile (southern stone). They serve as metaphors for the indigenous people of the Americas.

It was with great care and respect that our *kupuna* selected a stone. They spent many days both inside and outside of the park evaluating their relationship with certain stones, ultimately selecting one from within the park. As a part of the cultural landscape the stone represented the interface between Pele, the natural environment and human adaptation. The accretionary lava ball measured approximately 1.2 cubic meters and weighed 4,000 lbs.

Working with the government can present inherent challenges, and were there ever! Of critical importance was the determination of what authority the National Park Service could legally use to remove a 4,000 lb rock from within a national park. Yet clearly the project supported the mission of the National Park Service to collaborate in order to extend the benefits of natural and cultural resources, and the purpose of Hawaii Volcanoes National Park to perpetuate the Native Hawaiian culture. Working closely with officials from the Washington Office of the National Park Service, the Kupuna Consultation Group and the Smithsonian Institution's National Museum for the American Indian, the park negotiated a museum loan that outlined specific conditions, including additional conditions:

* The museum and the park acknowledge that the western stone represents the indigenous culture of Hawaii, which is inclusive of land, stories and myths, and both shall respect and honour the stone as a cultural ambassador of the native Hawaiian peoples.
* The park shall have the right to request the return of the stone and agrees to a twenty-year loan. If the park elects to have the stone returned, upon expiration of the loan term, it shall notify the museum in writing at least one year prior to its return, and return will be at the museum's sole expense.
* Should the park elect to have the stone returned they will, upon consultation with the *kupuna* and museum, or their successors or designees, select another stone to take its place.
* The museum waives liability but shall be responsible for the regular care and maintenance of the stone while in its possession in accordance with museum policies and procedures governing the care and maintenance of museum objects that remain outside in an unprotected climate. Dislodged portions of the stone shall be kept together until such time as the stone is returned to Hawaii Volcanoes National Park.
* Should the stone be mistreated or defaced beyond the control of the museum in its possession, they shall immediately consult the park to mitigate such occurrences.
* The park and museum both warrant and represent that they have the authority to enter into this agreement and that they have complied with all applicable laws, regulations and policies.
* Hawaii Volcanoes National Park has consulted with the Kupuna Consultation Group.

Once the stone was selected, representatives of the *kupuna* group conducted a 'separation ceremony' to prepare the stone

for its journey to Washington DC, and prior to the stone's removal from the park. Representatives from all parties concerned were able to attend the ceremony. However no filming or videotaping was allowed. The National Park Service carefully removed and wrapped the stone and recorded the original location so that upon return it could be replaced in that spot. The museum was responsible for the arrangements and cost of delivering the stone from Hilo, Hawaii to Washington DC, though Matson shipping lines donated the cost of the overwater transport. The evening the *pohaku* left the park a spectacular eruption occurred and Pele began making new rocks.

Upon reaching Washington DC, the *pohaku* was again blessed at its place in the landscape. When first laid the stone sat below the surface of the sidewalk and was immersed in water from a recent rainstorm. This was unacceptable to the *kupuna*, as it was important for the stone to be placed exactly as it had been in the park: on top of the ground, and most importantly, not sitting in water. Immediate consultation with museum staff resulted in the stone being lifted and placed again appropriately. After the blessing the group had the opportunity to visit Capitol Hill to share the story of the *pohaku* with Senator Daniel Akaka of Hawaii.

A contingent of hundreds of Hawaiian people attended the formal opening of the new museum, and marched in a parade that represented the largest gathering of indigenous people to ever occur in the Americas. Not only was this an opportunity for our *kupuna* to tell their story to the world, but it was also an opportunity for other indigenous people to be exposed to and interact with Native Hawaiian people. We were able to share and extend our museum without walls, a living, dynamic resource and a cultural treasure, and like the gentle Kilauea, draw visitors to the culture of Hawaii. It was the culmination of a very special journey for our *kupuna* and the *pohaku*, and an incredible responsibility that all were trusted with.

The threads that wove all of it together were the power of *lokahi*, or harmony and agreement; *ho'okipa*, or hospitality, and the aloha spirit of Pele, the breath of life and the spirit of the people of this land.

Acknowledgements

Hawaii Visitor and Convention Bureau
Photo and press credits: Keola Awong, David Boyle and Mardie Lane, Hawaii Volcanoes National Park.

References and further reading

National Park Service. 2004. *Conditions for Outgoing Loans*. US Department of the Interior, National Park Service, September.
Hawaii Volcanoes National Park. 2000. *Strategic Plan*. April.

Fig. 8 The Pohaku [left page, left]
Fig. 9 Blessing of Pohaku in Washington D.C. [left page, right]
Fig. 10 Separation Ceremony for Pohaku Voyage to Smithsonian National Museum for the American Indian [left]
Fig. 11 Kupuna consultation group and NPS staff, Washington D.C. [right]
Fig. 12 Red Lehua Ohia Blossom. Hawaii County flower [below]

Sacred mountains and landscape supporting biodiversity and human life: lessons from Mount Fuji and the Himalayas

Masahiko Ohsawa, Institute of Environmental Studies, University of Tokyo, Japan

Summary

Mountains support many pristine, diverse ecosystems along steep elevation gradients, and provide both the spiritual backbone and physical resources for human life. In this paper, I contrast the sacred mountain with the sacred landscape in relation to the spiritual, cultural aspects of human life and biodiversity conservation.

Mount Fuji, the highest and most symbolic mountain of Japan, is a typical example of a sacred mountain. During the Edo era, people who climbed the mountain were mostly pilgrims accompanied by a special guide called *Ong-shi*, though generally people preferred to worship it from a distant place in the foothills. Conversely, the Himalayas is a place where people live and work. The harsh, unpredictable and dangerous environment forced people to rely on the deities and spirits said to be everywhere in their surroundings. This animistic belief is strongly related to Bon, a native religion of Bhutan and Tibet. In both cases however, mountain ecosystems are the substantial bases for human life, and local people utilize the landscape and its resources including biodiversity in sustainable ways.

A similar recognition of the importance of conserving integrity in a landscape or watershed can also be found in similarly resource-limited island ecosystems, for example in Okinawa, Yakushima, Hawaii and the Canaries. In traditional Japanese villages, people generally divide the area into *Sato-yama* for human abode and *Oku-yama* for the spirit abode, including plants and animals. It is essential to keep the cascading system from nature to human territory in balance for the sustainable reconciliation of people and nature in a mountain ecosystem.

Introduction

Nearly 22 per cent of the world's human population inhabit mountains, and most minorities, who share the majority of human cultural diversity and represent 28 per cent of endangered languages worldwide, occur in mountains (UNEP-WCMC, 2002). Six major categories of protected areas defined by the World Conservation Union (IUCN) are also concentrated on mountains, in which the complex topography provides different habitat types for the various ecosystem types and species to coexist: otherwise they would be locally extinct as a result of competition. Among the thirty-four biodiversity hotspots, nearly half are located in mountains, such as those in the Caucasus, Eastern Afromontane, the Himalayas, central Asia and Japan (Conservation International, 2005). Thus the global mountain system is a centre of human as well as plant and animal diversity. Most of the biological refuges during the ice age were also concentrated in the present mountain systems, such as those of the northern Andes, the Rockies, south-west China and Japan. Most of these are oriented north–south and thus facilitate species migration, enabling them to escape extinction during climate change (Tang and Ohsawa, 1997). Besides the biological diversity, people also rely on other essential resources of mountains such as timber, medicinal plants, firewood, fibres, foods, water, rocks and minerals, and energy.

Another important aspect of mountains is their spiritual and cultural heritage, which supports human life. Sacred sites and religious centres of cultural significance are also concentrated in mountains (Bernbaum, 1997). This is mainly because of the reliance of human life on mountain resources, as mentioned above. In East Asia, people also think that the mountains are abodes of their ancestors or spirits. Thus they worship sacred mountains, and each mountain has a special ceremony in early summer to open the mountain to the general public, called *Yama-biraki*. Even though such cultural history has a long past, we have

not been not effective in institutionalizing means to conserve the natural as well as cultural heritage of mountains in a sustainable manner for future generations.

A sacred mountain, Mount Fuji

Since prehistoric times, Japanese people have worshiped Mount Fuji for its height (3,776 m) and solemnity. When we face an extraordinarily breathtaking scene like Mount Fuji, we often feel that there is some sacred divinity behind it (Figure 1). It is a symbolic mountain in Japanese culture and provides spiritual support for daily life for the Japanese. The oldest collection of poems (*Tanka*), *Man-yo-shu*, compiled in the eighth century, has eleven poems about Mount Fuji, and there is a lot of other literature, fine arts and the like showing how it has fascinated people with its beauty and divinity. *Ukiyoe*, the famous woodcuts of Mount Fuji by Hokusai, were used just like talismen by the people of Edo (Tokyo) in the early nineteenth century, and twentieth century wall paintings in public baths were mostly of Mount Fuji. The Japanese do not worship Mount Fuji as a real god in the western sense. Hartz (2003) explains that god in the Shinto (native Japanese) religion is rather about spirits that live together with human beings, and the Japanese god and spirit are often inseparable.

The main shrine of Mount Fuji, *Fujino-miya* or Fuji Sengen shrine, is located in *Fujinomiya* city in Shizuoka Prefecture. The original shrine, *Yama-miya* (mountain shrine) was said to enshrine Asamano-Ohkami, a kind of nature worship of the volcano, said to extinguish fire after severe eruption of the mountain around the eighth to ninth century. The governor at that time only established *torii* (gateway to the shrine) and an altar; there were no buildings since the god is Mount Fuji itself, and people worship the god by facing the mountain (Figure 2). The original location of *Yama-miya* was in between the sacred mountain and the *sato* where people live (Endo, 1987). During the seventeenth century, Konohana-sakuya-hime (the goddess of cherry blossom), daughter of the chief mountain god Ohyamatsumi-no-kami, was also regarded as the goddess of Mount Fuji. Its deity might be female, but in former times women were prohibited to climb the mountain. The mountain was only officially opened to women after 1872. Ohyamatsumi-no-kami is a son of the couple Izanagi and Izanami who created the Japanese archipelago by stirring sea water with their sword from the heavens, and the droplets became all the islands on which we live. Thus mountains are thought to be directly related to the genesis of Japan.

Most of the Japanese mountains have a Shinto shrine at their summit, which usually enshrines mountain gods such as Ohyamatsumi-no-kami. Following the Edo era, most westerners visiting Japan were surprised by the fact that Japanese people worship mountains as gods or goddesses. Edward Morse, an American zoologist who discovered shell mounds in Ohmori near Tokyo in 1862, was also surprised to observe the many Japanese people climbing mountains to worship a mountain deity, and also finding shrines built around the top of mountains, since he had never seen such customs in his own religion (Morse, 1917). The special powers of the mountain gods are many, as is usual for other gods. However, their principal powers are to tame the harsh environment which often destroys the peaceful balance of human life, to provide a stable harvest, and to overcome disasters such as fire, famine, disease, flooding and drought.

Although Japan is a mountainous country (61 per cent of it comprises mountainous terrain), Japanese people live mainly on flat land like floodplains, river deltas and

Fig. 1 'Kage Fuji', a shadow cast by Mount Fuji, looking towards the northern foothills of the mountain (August 1984) [left]

Fig. 2 Mount Fuji and *torii* (gateway to shrine) of a shrine in the northern foothills at Yoshida. An old picture taken in the late nineteenth or early twentieth century. [right]

plateaux; the mountain itself is inhabited by only 10 per cent of the population. Thus mountains are less inhabited and thought to be sacred and are the abodes of gods and spirits. There is a Japanese saying, 'Foolish are those who do not climb Mount Fuji, and foolish are those who climb it more than once.' This means Mount Fuji is a mountain not to climb but to view from a distance. We call this type of mountain worship from a distance *Yo-hai* (worship from afar). During the Edo era, however, *Fuji-ko* (Fuji pilgrim association) people guided by *Ong-shi* climbed Mount Fuji, mainly from Edo and the surrounding cities. More than 300 *Fuji-ko* were recorded in Edo during the seventeenth and eighteenth centuries (Iwashina, 2000). We call this type of mountain worship *To-hai* (climbing worship), and the pilgrims believe that they are purified through climbing by mountain deities and spirits. Local people living around the foothills of the mountain complained of the overcrowded mountain roads and that too many pilgrims often caused a shortage of food, and polluted the place by leaving excess amounts of litter on the mountain (Aoyagi, 2002). The difficulty of visiting and climbing Mount Fuji often led people to opt for an easy way to worship it: they established miniatures of Mount Fuji, called *Fuji-tsuka*, in their towns as shrines for daily prayer (this custom started in Edo in 1779). In former Edo towns, more than fifty such *Fuji-tsuka* were established. Most of them are still remaining, and are well maintained among the skyscrapers of Tokyo (Figure 3).

Farmers usually have two festivals, in spring and autumn. The spring festival is to welcome the god from the mountain to their paddy fields to protect their crops from various misfortunes, and to obtain a good harvest (Yanagida, 1961). The mountain god invited to paddy fields is called *Sa*. There are many words using Sa, like *Sa-tsuki*, May the month god coming down from the mountain; *Sa-nae*, holy rice seedlings; and *Sa-otome*, holy girl planting *Sa-nae*. The autumn festival is a thanksgiving festival to the gods for their protection and good harvest for the season, and for the god returning to the mountain. Thus the mountain stream and the paddy downstream are alternately protected by the same god.

People also use features of the mountain like a calendar as an indicator of the timing of farming practices. In snowy mountains the changing pattern of the remaining snow patches is a good indicator of when to start filling the paddy with water and begin cultivating the paddy fields in early spring. Hokusai, the famous *Ukiyoe* artist, drew a snow pattern on Mount Fuji, *Fuji-noh-otoko* (Fuji farmer). Local farmers believe that if this *Fuji-noh-otoko* appears distinctly in spring, the year will provide a good harvest (Figure 4). There are many springs around the foothills of Mount Fuji, and these are an indispensable water source for paddy fields as well as an ecosystem housing characteristic aquatic flora and fauna.

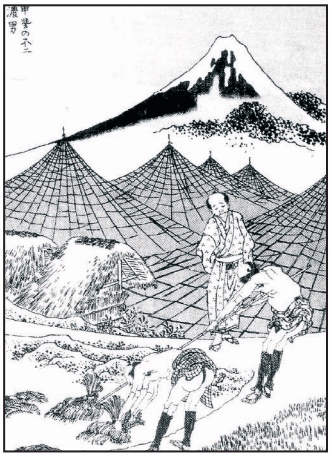
Landscape structure and biodiversity: Sato and Yama

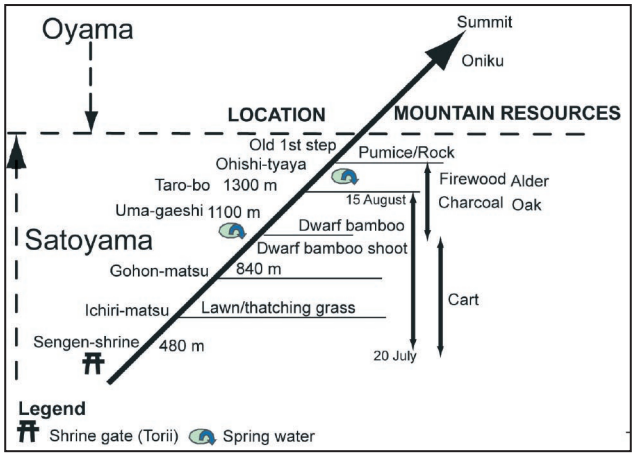
Japanese people think that mountains are sacred because there are few permanent settlements and they are not spoilt by people, but full of natural spirits and wild plants and animals. Biodiversity may be strictly preserved when it is isolated from human activity. Therefore high and inaccessible mountains are by their nature a place where the biodiversity is well preserved.

In traditional mountainous areas of Japan, people recognize two categories of mountain: *Mae-yama* (front mountains) or *Sato-yama*, where people can utilize resources for themselves such as firewood, charcoal and other forest products, and can even sometimes carry out shifting cultivation; and *Oku-yama* (inner mountain) or *O-yama*, the territory of gods and spirits. Up to around 150 years ago only men were allowed to climb, particularly most of the sacred mountains. In the southern slopes of Mount Fuji, Nomoto (1993) described the natural resources that people were utilizing around seventy years ago (Figure 5).

Above the *Sato-yama*, the area leading up to the *Oku-yama* of gods and spirits is mostly occupied by natural vegetation. Mount Fuji is still a young volcano, and one of its parasitic cones, Mount Hoei on the south-eastern slope, erupted only around 300 years ago, in 1707. The slope of that side is still devoid of forest vegetation. In the central part of Honshu, the biggest island of Japan, Mount Fuji is exactly located in a large tectonic zone of the mid-Tertiary period called Fossa Magna, which overlaps with the Fuji volcanic zone. This tectonic zone, which stretches from Shizuoka on the Pacific Ocean to Itoigawa on the Sea of Japan, creates a large-scale division of Japan into a western half of mainly older rocks and an eastern half of mainly volcanic rocks of relatively new origin. The new, open volcanic desert created by eruption facilitates speciation through hybridization or polyploidy, and many endemic plants have evolved called Fossa Magna species, such as *Cirsium purpuratum, Asarum savatieri, Stephanandra tanakae, Cacalia amagiensis* and *Weigela coraeensis* (Figure 6) (Maekawa, 1974).

Through a series of eruptions, Mount Fuji has acquired slopes of varying origin from different geological time periods, ranging from the youngest, pioneer volcanic desert of the south-eastern Gotenba series (from 300 years ago), through seral forests on the eastern slope of the Subashiri series, to the early climax stage of the northern slope of the Yoshida series, and to well-developed nearly climax forest zones of the north-western Shoji series (Figure 7). This clearly represents the developmental pattern of mountain vegetation zonation (belts), and the tree line, which rises from around 1,200 m to the climatic upper limit at 2,700 m on Mount Fuji (Ohsawa, 1984). Generally, as the progression of successive vegetation climbs up the slopes, the boundary between





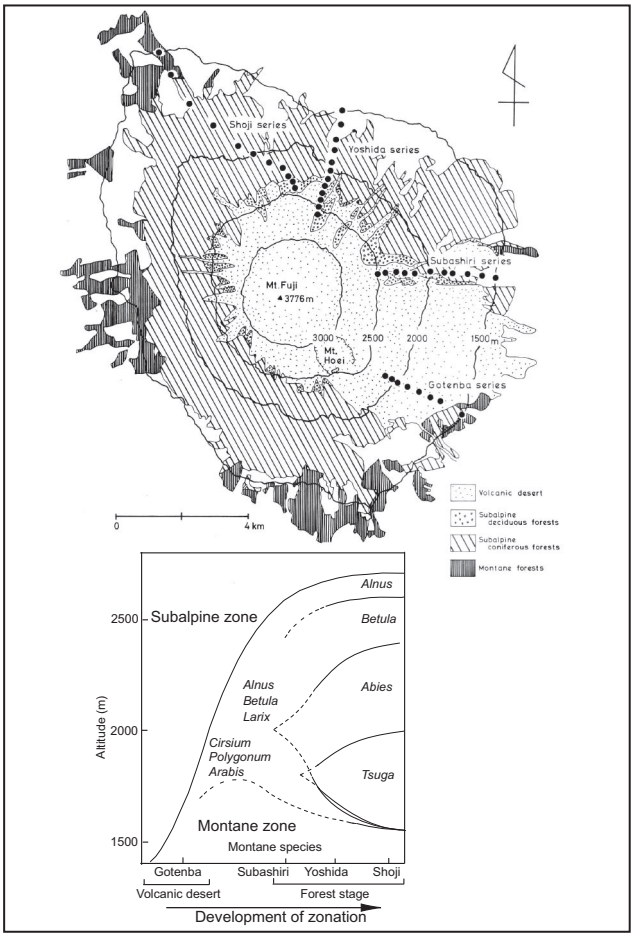


Fig. 3 A typical example of *Fuji-tsuka*, a miniature Mount Fuji, in Fuji Shrine, Bunkyo-ku, Tokyo (2005) [above left]

Fig. 4 Fuji farmer '*Fuji-noh-otoko*' by Hokusai (1834). This black shadow figure of a farmer holding a plough appears on mountain slopes after the partial melting of snow in the spring [above right]

Fig. 5 Environmental folklore of Mount Fuji in the early twentieth century, based on an interview with T. Katsumata (born in 1915)

Source: Nomoto (2003) [middle left]

Fig. 6 *Cirsium purpuratum*, a Fossa Magna plant species in Gotenba, Mount Fuji [below left]

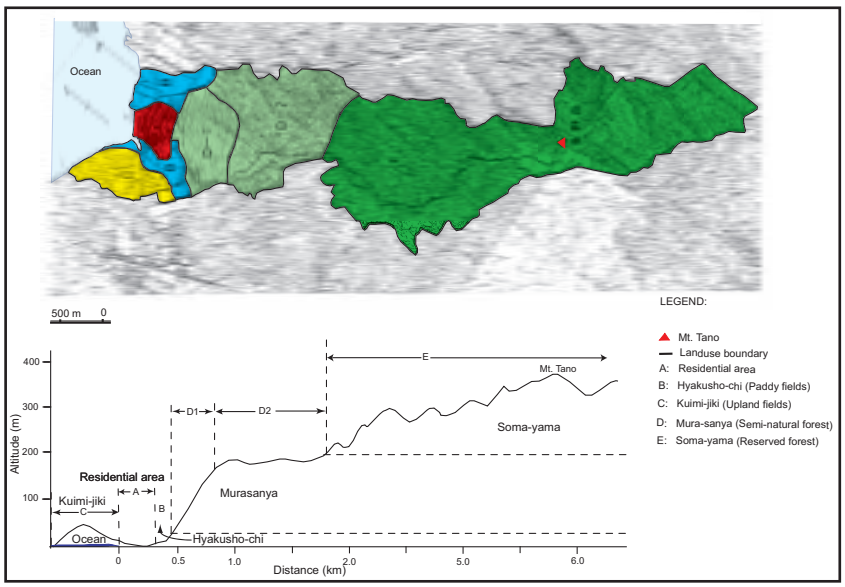
Fig. 7 Pattern of vegetation zonation in the time course of developmental stages of vegetation on different slopes, from the earliest Gotenba, through the Subashiri, Yoshida and Shoji series. Black dots represent sampling plots for a vegetation study. Source: Ohsawa (1984) [below right]

vegetation belts becomes clearer because of mutual exclusion among the dominant species (Figure 7).

The resource utilization in mountainous areas is somewhat similar to that in island ecosystems, since both are isolated from the surroundings and resource-limited. In Yambaru, in the northernmost mountainous part of the Okinawa Island, southern Japan, village people divide their property land into five sectors from the seashore to the mountain top (Yambaru-type land use: see Figure 8). There are a residential area facing the sea (2.5 per cent of the total land area of a typical village property); paddy fields (*Hyakusho-chi*, 5.9 per cent) in the alluvial plain surrounding the residential area; upland fields next to the paddy fields (*Kuimi-jiki*, 5.1 per cent), which are also used as shifting cultivation areas; and the background is semi-natural forest called *Mura-sanya* (a kind of *Mae-yama*, 26 per cent), which is used for gathering firewood, burning charcoal, and other daily commodities by the farmer. The zone beyond this is called *Soma-yama* (a kind of *Oku-yama*, 60.5 per cent) which belonged to the feudal lord. It was prohibited for the farmer to cut trees in this zone because the trees are reserved for the feudal lord (Nakahachi, 2001). Although this system was established under the feudal system more than 200 years ago, some upland areas are still preserved as pristine forests, and can also provide clean water and other mountain resources for lowland communities.

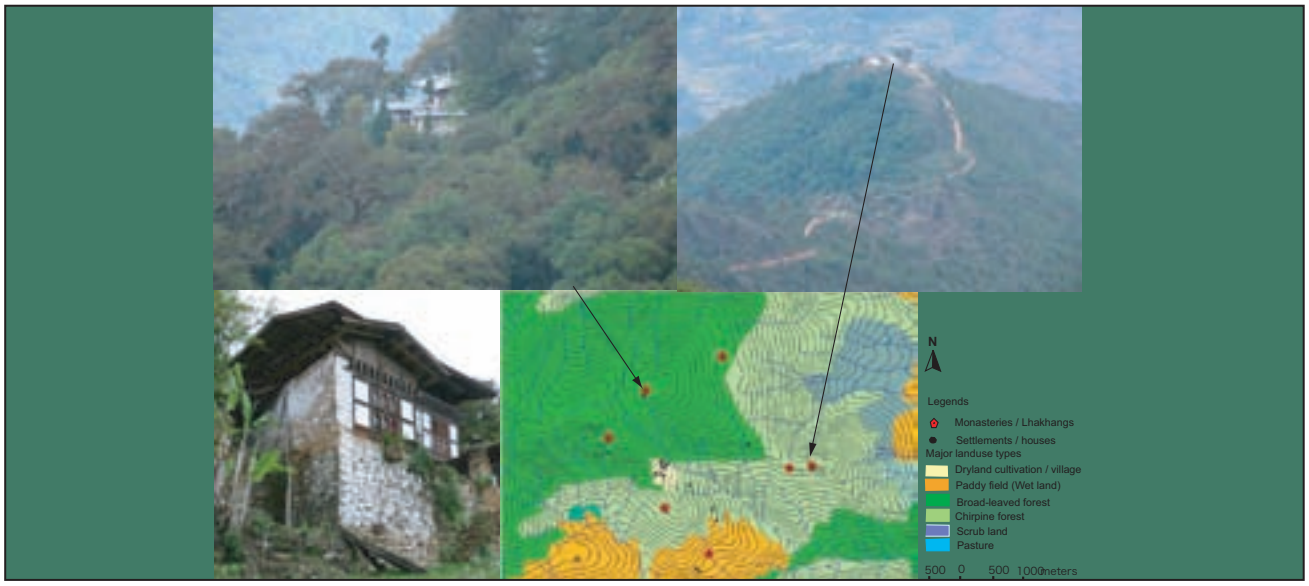
In the traditional agricultural villages of Japan, even the agricultural practices are often beneficial to maintain local biodiversity. Farmers mow the roadside verges, forest edges of paddy fields and similar areas to avoid shading by other plants and invasion of weeds (Figure 9). These long-lasting maintenance works of rice cultivation have unintentionally created special habitats for diverse plant and animal species which are otherwise locally extinct within the traditional agricultural landscape as a whole (Kitazawa and Ohsawa, 2002). During the maintenance work of paddy fields and their surroundings, farmers also pray to the local deity of the land and agriculture called *Jizou*' (Figure 9).

This is similar to the ancient land-use system of a unit of the watershed called Ahupua'a in Hawaii, where the local people divide the mountain slope into a series of land use zones, from human settlements towards pristine natural forests, maintained for biodiversity (Eckern, 1993; Ziegler, 2002). People live on the dry seashore, called *Kuhakai*; the back yard is called *Kula*, and people carry out agriculture by selecting different crops depending on the precipitation available for each altitudinal belt. Behind the *Kula* is the cloud zone of the mountain, called *Wao*, and the slope is subdivided into *Wao Kanaka* for use by the community for collecting firewood or other forest products, *Wao Akua* for the forest spirits including various wild plants and animals, and to maintain a rich biodiversity, and finally *Wao Nahele*, which is primary forest extending up to the mountain, called *Kua*.



The sacred landscape, Himalayan grandeur and human life

In Tibet and the Himalayas, people worship the 'indescribable grandeur and fascination arising from mountain (Tibetan) landscape' (Baumer, 2002) where they live. In the high altitudes of Tibet and the Himalayas, the potential of land productivity is relatively low because of harsh climatic conditions; the unpredictable weather sometimes strongly affects or even damages all the agricultural crops, domestic animals, and even people's lives. But it is common experience that the situation can change within a few minutes, and a severe hailstorm suddenly transforms into peaceful sunshine with rainbows



(Figure 10). This fearful but fantastic life inevitably leads to worship and prayer to any spirit if it is believed it might have the power to control or rescue the situation. People believe that only super natural power manifested by oracles, deities and cults can cope with such conditions.

The animistic religion of Tibet and the Himalayas is called Bon (Bonism). People worship everything around them such as wild plants and animals, rocks and water, as having spirits or deities. *Lama* or monks sometimes act as warriors against such demons to protect ordinary people to live without fear.

In Bhutan there is a lot of evidence of people's tendency to rely on their local deity to perform some action with regard to nature, such as logging, the collection of medicinal plants or wild vegetables, or even stones and soils. The mountain paths used for their daily life also have deities at distinct points on the road such as mountain passes and gateways to villages, and it is also necessary for these to be tamed by religious people so as to protect the passengers' safe journey. Much the same is true of mountain peaks, steep cliffs, beautiful lakes and so on (Figure 11).

Fig. 8 Yambaru-type land use, commonly observed in northern Okinawa Island, southern Japan. The territory of Haneji-Nakaosi village and its land use classification. Source: modified from Nakahachi (2001) [left page, left]

Fig. 9 A well-managed rice terrace in Kamogawa, Chiba. A farmer is mowing grasses surrounding the paddy fields, and a stone statue of *Jizou* sits besides the field (April 2005) [left page, right]

Fig. 10 A drastic change of weather in Bhutan, Himalayas. After a hailstorm, suddenly the sun shines and a double rainbow appears over the sacred mountain (Gyaza, June 2000) [above, left]

Fig. 11 Boundary of a village, Dogar, southern Bhutan. Villagers gather to say farewell to visitors (October 1989) [above, right]

Fig. 12 Nahi village and its surroundings in west-central Bhutan. The village centre (housing complex) is surrounded by several *Gompas* (monasteries) built at all the strategic points around the housing lots, and people are watched and guarded by monks from all directions. Map prepared by Pema Wangda (May 2004, March 2005) [below]

After Buddhism was introduced to Tibet around the fifth to seventh century, people often built monasteries called *Gompa* on such sacred places. The sacred places of local deities that overlook a whole valley or the opposite side of the ridge are at the same time strategic points. The monks inhabiting the monastery often seemed to play a warrior-like role whenever the village was under hostile attack. The Buddhist monasteries therefore had a role as fortresses, acting against not only natural powers but also human enemies. The peaceful life of the farmers was thus guarded by the *Gompa* established at strategic points around a village landscape (Figure 12). The surrounding forests of each *Gompa* were kept as dense natural forests to provide shelter for the meditating monks, and even daily food was carried by local people from a fairly distant local village.

To build religious monuments such as *Gompa* and stupa, a huge amount of construction material is required, such as timbers, stones for the base, and sand for wall construction. The work is a kind of taxation in remote places in the Himalayas, and local farmers are requested to work on the construction. Local people collect timbers from forests, stones from roadside and so on by themselves. It is worth noting that when local people collect timber for construction of Buddhist *Gompa* from the surrounding forests, they built *Lhaptsa*: small stone heaps decorated with the branches of trees such as pines and rhododendrons, as offerings to the local deity. This custom originated from Bonism rituals (Figure 13). Bhutanese farmers believe that the forest and its components such as trees, stones and soils each have their own spirit, or a spirit of the forest as a whole. So if they remove materials from the forests, they pray to the local deity with offerings.

Integrative conservation strategies of cultural diversity and biodiversity in mountain zones

There are two classical, contrasting systems of biodiversity conservation. One is the protected area system, or natural ecosystem conservation, which excludes most human activities to preserve a natural system in a pristine state. A typical location for this is the core zone of a protected area, where human activity is kept minimal. Conservation of a sacred mountain is somewhat similar to this concept. Another system is known as landscape or semi-natural ecosystem conservation, in which the system to be conserved includes not only the pure natural ecosystem but various semi-natural ecosystems under human influences,

including traditional, cultural landscape elements. People intend to keep the landscape and surrounding ecosystem in a healthy condition to obtain a stable harvest, clean water and sustainable natural resources as well as an aesthetic and peaceful landscape.

Recently, agricultural landscapes have been recognized to be as important as the habitat for certain biota that cannot inhabit pristine, wilderness areas. However, we still lack the scientific understanding of the working mechanisms of farming systems coupled with the pristine, natural ecosystem, and we seek the management tools for sustainability in the wider perspective at the landscape level to maintain both the regional diversity and human well-being. The traditional Yambaru-type land use systems in Okinawa and Ahupua'a in Hawaii are both good examples of integrative management at landscape level that

reconciles artificial systems with semi-natural and natural systems. For farmers, the land set aside for gods and spirits is necessary not only as a source of water and other physical resources, but also for spiritual support, for daily life to coexist with wild, pristine nature. *Fuji-ko* in the Edo era was a similar mechanism to integrate human activity in town areas with the sacred, natural mountain of the gods, as the backbone in a much wider perspective. Most of Hokusai's Ukiyoe, as is clearly shown in Figure 14, depicts Mount Fuji as the background of people's daily life in Edo (present Tokyo) and the surroundings (*Fugaku-36-kei*), and this is a typical, practical benefit of worshipping sacred mountains from afar, *Yo-hai*, for the people's daily life.

References and further reading

Aoyagi, S. 2002. Nyonin-tozan-kinnsei-syokou (a consideration on women forbidden to climb mountain. Interaction between Fuji pilgrimage and local people.) *Fujisan to Nihonjin* (Mt. Fuji and the Japanese). Seikyusha, pp. 143–60. (In Japanese.)

Baumer, C. 2002. *Bon: Tibet's Ancient Religion.* Weatherhill, Conneticut.

Bernbaum, E. 1997. *Sacred Mountains of the World*. Berkeley, Calif., University of California Press.

Conservation International. 2005. *Hotspots Revisited*. CI Facts. Conservation International. Washington Dc.

Eckern, P. 1993. Climate and agriculture. M. Sanderson (ed.), *Prevailing Trade Winds: Weather and Climate in Hawaii*. Honolulu, University of Hawaii Press, pp. 86–95.

Endo, H. 1987. Fujisan-shinko-no-hassei-to-Sengen-shinko-no-seiritsu (The rise of worship of Mt. Fuji and the establishment of worship of Sengen) E. Hirano (ed.) *Fuji-Sengen-Shinko Yuzankaku*. (In Japanese.)

Hartz, P. R. 2003. Shinto. *World Religions*. Facts on File.

Iwashina, K. 2000. *History of Fuji-ko. Mountain Religion of Yedo Commoner.* Meicho Publ. (In Japanese.)

Kitazawa, T. and Ohsawa, M. 2002. Patterns of species diversity in rural herbaceous communities under different management regimes, Chiba, central Japan. *Biological Conservation*, No. 104, pp. 239–49.

Maekawa, F. 1974. Origin and characteristics of Japan's flora. M. Numata (ed.), *The Flora and Vegetation of Japan*. Kodansha and Elsevier, pp. 33–86.

Morse, E. S. 1917. *Japan Day by Day.* Boston, Massachusetts

Nakahachi, Y. 2001. Mountain. Folk customs II. *Cultural History of Nature*. History of Nago City. (In Japanese.)

Nomoto, K. 1993. Fuji-sanroku-no-kankyo-to-minzoku (Environment and Folk culture in the foothills of Mt. Fuji). Proceedings of symposium on Mt. Fuji. *Folklore of Mountain and Forest*. Hagoromo Syupan. (In Japanese.)

Ohsawa, M. 1984. Differentiation of vegetation zones and species strategies in the subalpine region of Mt. Fuji. *Vegetation*, No. 57, pp. 15–52.

Tang, C. Q. and Ohsawa, M. 1997. Zonal transition of evergreen, deciduous, and coniferous forests along the altitudinal gradient on a humid subtropical mountain, Mt. Emei, Sichuan, China. *Plant Ecology*, No. 133, pp. 63–78.

UNEP-WCMC. 2002. *Mountain Watch*. Environmental Change and Sustainable Development. UN Environment Programme-World Conservation Monitoring Centre. UNEP, Nairobi.

Yanagida, K. 1961. *Mitoshiroda-kou. Folk culture No. 2. Works of Kunio Yanagida*, Vol. 13, pp. 411–30. (In Japanese.)

Ziegler, A. C. 2002. *Hawaiian Natural History, Ecology, and Evolution*. Honolulu, University of Hawaii Press.

Fig. 13 A newly constructed *Lhaptsa*, a stone heap, dedicated to the local deity: a substitute sacrifice to the goddess, near the logs collected to build a Buddhist monastery nearby (Nahi village, west-central Bhutan, March 2005) [left]

Fig. 14 A part of Hokusai's collection *Fugaku-36-kei* (Thirty-six scenes of Mount Fuji). Source: *History of Japan*, Weekly Encyclopedia No. 85, Asahi News Paper Co., 1987 [right]

Adam's Peak in the cultural landscape of Sri Lanka: evidence for an eco-cultural basis for conservation

Anoja Wickramasinghe, University of Peradeniya, Sri Lanka

Summary

Cultural landscapes are the foundation initiatives for integrating local communities as custodians and their culture as instruments for creating unified ecological and cultural domains. The Adam's Peak wilderness extends over a vast tract of land in the central mountain massif of Sri Lanka, and provides evidence for the cultural manifestation of human association with nature, nurtured by moral and spiritual potency. The cultural and human dimensions that adhere to Adam's Peak have evolved in relation to the sacred footprint shown on the Samanthakuta, which is the highest peak of the mountain range. The history of this sacred mountain forest explains the ways in which people have maintained linkages and recognized symbolic relationships.

An in-depth analysis of the eco-cultural context affirms the superiority of the sacred mountain forest and the grounds that have marked the generations-long human–nature relationships. The field evidence demonstrates the features of the culture–nature nexus. Cultural superiority results from religion, belief systems, perceptions, symbolic and hierarchical relations, and service functions. The forest fringe communities have developed customary practices and introduced regulatory measures. Local governance is accepted, from the proximal to the distant, mainly as a result of the fear of being punished by superior territorial powers. The unique ecological diversity is a tremendous attribute in the conservation of the cultural domain.

Community stewardship is the social capital for conservation of this unique mountain ecosystem in its commanding position. Its significance is strongly associated with religions, belief systems, territorial governance, a sense of ownership, respect for local authority, reciprocity and collectiveness. Local perceptions about sacredness and the governance system for living in harmony are discussed in examining the eco-cultural essence for conservation.

There are two key challenges for the sustainable management of this sacred landscape. The first is the promotion of institutional structures and mechanisms, and the second is the provision for accommodating traditional custodians and their domain of knowledge and culture as local instruments. The management of Adam's Peak as the anchor of Sri Lanka's cultural landscape and a World Heritage Site requires an inclusive and community-based approach because its essence originates from a long-standing culture.

Introduction

The uniqueness of Adam's Peak is marked by its biological diversity, which has evolved in association with its location, topography, climate, past history and position in the cultural domain. The Adam's Peak wilderness area is the anchor of the central arch of the mountain range running in an east–west direction. It rises to an elevation of about 2,243 m, with a conical summit running from its broad shoulder plateau. In 1940 around 22,379.9 ha of the wilderness was designated as a nature reserve and administered by the Department of Wildlife Conservation.

From an eco-cultural perspective Adam's Peak deserves recognition both nationally and globally. Physically it has a commanding position, projecting conspicuously above the surrounding area. Rock cliffs distinguish the Samanthakuta, where the sacred footprint is located, from the surrounding plateau. It has been long recognized as the mountain range that nurtures three major rivers, the Kelani, Kalu and Walawe, as well as Mahaweli at its eastern edge on the Hortan plains. Its dominating control over the major rivers has earned it recognition as the 'water tower' of Sri Lanka; the radially spread tributaries are essential sources and providers of water for the secure livelihood of local communities.

Recognizing its importance as a mountain ecosystem and its wealth of biodiversity, the whole wilderness area was declared a sanctuary in 1940. Its cultural importance and national significance are increasingly being associated with a perceived value system which has a history covering several generations, but which has remained outside the dominant paradigm related to 'conservation'. From cultural perspectives the richness of the Adam's Peak wilderness area deals with long-standing human linkages (Wickramasinghe, 2003a).

The areas of tremendous implications for conservation include:

* A culturally significant value system through which the conservation of the peak wilderness sacred mountain has been internalized into the social domain of the people.
* The linkage between its broader ecological zones, specific habitats and niches, and the non-forest environment. It consists of tropical lowland, sub-montane and montane forests enriched through morphological and climatic variations. The level, intensity and nature of the human linkages are diverse and spatial.
* The multicultural significance of the sacred footprint.
* Therapeutic and amenity values of the sacred mountain.
* The symbolic dimensions noted in the hierarchy and power relations between the natural wilderness, and the dependence of non-forest dwellers on the services renewed through natural processes.

The objectives of this paper are to examine the long-term perspectives, taking into account the linkage between the peak wilderness and the cultural domain, for the effective management of Adam's Peak as a sacred site, recognizing its importance in the national and international heritage.

Meaning of cultural landscape: the case of Adam's Peak

The academic discourse on cultural landscapes has provided many definitions enabling us to deal with site-specific contextualities. Culture, being specific to the local context, has described the fundamental attributes of human–nature interactions shaped through symbolic, historical and practical relations maintained over a long period. Unlike many cultural landscapes to our knowledge, Adam's Peak is very special in the sense that it has extended explanations for human–nature relations beyond biophysical grounds. The wilderness itself is a demonstration of the effectiveness of the commonly perceived grounds that are associated with religious superiority for conservation. The values placed on the wilderness as a cultural landscape stem more from religious superiority enriched with symbolic relations, belief systems and socially embedded governance. Therefore the human relationship with this sacred landscape is observable, and has evolved in relation to the sacred footprint located on the conical peak.

The physical expression of the superiority of Adam's Peak is, on the one hand, related to the conical shape of Samanthakuta, the rock summit pointing towards the sky, touching the world above us – above the skyline. On the other hand it is associated with the religious and belief system. Its natural domain and the human linkages have laid the foundation for the eco-cultural dimensions primarily through religion and the belief system. For instance, local people accept the scenic beauty of Adam's Peak as a symbol of superiority. The visual appearance of Adam's Peak is panoramic and commanding. Therefore, in terms of hierarchy and power it is meant to represent invisible powers with full authority to guide human beings. Eco-cultural perspectives

tend to combine the commanding position of Adam's Peak with its social and religious dimensions. In the hierarchical relations, the wilderness area has the potential for physical regeneration of its resources and services for the psychological and physical well-being of the people. Its forest is rich in diversity, and fosters goods and services. It is also rich in supportive regeneration processes.

Sacred natural sites focus on culture and extend attention beyond material values, which provide unique ingredients for internalizing communities into conservation while contextualizing common grounds for conservation. There is also a tapering-out gradient, which makes us consider the different levels of involvement. The unique significance of Adam's Peak is connected with reverence. Reverence of the footprint and the surrounding nature is combined. People in their day-to-day lives revere this supernatural object as home to the territorial god and invisible super powers before they begin their daily activities. The pilgrimage season in reverence to the sacred footprint endows the system with human

Fig. 1 Samanala Adaviya, the sacred mountain forest of Adam's Peak extends over twenty-two thousand hectares. For Buddhists and Hindus alike it is the abode of the God Sumana Saman

contact. The ascension is carried out arbitrarily but begins with vows demonstrating the pilgrims' promise to follow the territorial rules, authority of the god and respect for generosity.

According to records, around 3 million people climb this mountain every year between the full moons of December and May. The disciplined tradition of the pilgrims has passed from one generation to the next. Respect for purity is represented by disciplinary rules, where it is expected that pilgrims will bathe in the holy water running along the *Seetha-gangula* stream, wear clean clothing, sing *Thunsarana*, the meritorious teaching of Lord Buddha, and avoid eating flesh. The cultural and ecological artefact is enriched with the long-established relationship and practice of nature worship and its superiority over human capacity.

Reverence is not confined to one ethic group or to one religion. It is believed that the true imprint lies on a precious stone beneath the artificial print resembling the features. The Adam's Peak sacred mountain is of multicultural significance. Buddhists believe that the sacred footprint is the imprint of the left foot of Lord Buddha. Muslims believe that the relict is the footprint of Adam, and the peak has been called Baba Adam – Malai or Father Adam's Mountain. Christians believe that it is the footprint of St Thomas, while for Hindus it is the footprint of the god Shiva. Legends and belief make it possible to embrace all ethnic groups under a common interest to safeguard and revere the sacred footprint in a collective and harmonious way. Under these circumstances the meaning of this cultural landscape to the nation is connected with religion and manipulated linkages.

Linkages and incentives for conservation

The informal and cultural domain associated with the Adam's Peak Wilderness makes it clear that culture is vital and has evolved in relation to the tangible and intangible elements. Living in the vicinity, just below the sacred place, is accepted as a blessing that contributes to psychological well-being. In this dichotomy of culture, nature is materialized through two-way linkages: on the part of wilderness, it extends services that support the people; and on the part of people, it is manifest in their commitment. These linkages exist in many forms, and the most striking, as indicated by those involved, is a master–steward relationship. This dual linkage is maintained through many incentives.

- The incentives for the community stewardship are in the form of services, generosity, intangible and tangible benefits.
- The sacred mountain as the living 'excellency' extends its generosity by regenerating the essential services that are delivered throughout.
- Linkages are guided by nature and mediated through cultural practices and regulatory measures, by which a feeling of responsibility and security has been established.
- On the part of communities the obligations and instruments are materialized through nondestructive use of the resources, with the interest of conserving and respecting the diversity, holistic and natural functions.
- The characteristics of the sacred mountain forest: its resources, sanctity, services and regenerating process, regulate the extraction of its natural resources.

The intangible elements are more diverse and rigorous, but observable in relation to behavioural patterns. The tangible benefits and services are widely known. The conservation commitments are instrumentalized primarily through linkages. The nondestructive use of the resources of the wilderness area takes place in relation to these.

The practical understanding of the service function of the wilderness is well recognized, and it is found at different levels from the distant to the near at hand. For instance, the management of the mountain forest of the wilderness is accepted as of central importance to the livelihood and security of the people. The rivers descending the mountain are the source of water for drinking, irrigation and other uses. This distal linkage is enriched with an ideological and belief system, especially in proximal areas. The water running down the streams, and also the waterspouts and springs, are of curative qualities to those who live on the forest fringe. The water is considered to have curative and preventive qualities. The purifying effects are associated with the system whereby water infiltrates the canopy and filters through the roots of the medicinal species of the sacred mountain forest. How people perceive the goods and services of the sacred mountain has an impact on the ways in which they undertake the responsibility for conservation (Wickramasinghe, 2003*b*).

Symbolic relations and social practices

The social practices that are in place are diverse, and central to the continuity of the collective responsibility for the conservation of the cultural landscape. Many practices are enriched by local perceptions, where the sacred mountain forest or *Samanala-Adaviya* is seen as a living 'excellency'. For the local people it resembles the head of their territory, its autonomous rights, purity, generosity, superiority, power and also its own governance, which qualities are determined by nature, invisible powers and linkages. The symbolic relations are enriched by the local understanding of the ecological function of the mountain forest and the linkages that are extended to the surrounding lowland terrain. The traditional people see it as a living organism with superior and commanding powers:

Sripa Adaviya is superior to all manipulated systems;
full of great powers. This should be treated subjectively.
This is a huge organism. It has produced various habitats

for thousands of flora and fauna. This Excellency nurtures the life forms and maintains diversity across the terrain. It provides food, water and shelter and regenerates materials season after season and sustains conditions to support all living beings. Its superiority cannot be explained, but should be understood. The sacred mountain forest has sustained itself through natural processes, and every plant and animal within it can be found to be useful.

The rivers descending from the mountain are a symbol of power, generosity and responsibility of the head of the terrain – the excellency – to regenerate and deliver essential goods and services for dependants. Studies conducted in the dry zone of Sri Lanka (Wickramasinghe, 1997) revealed that traditional people believe mountain forests are living organisms and occupy the highest position – the commanding position in the hierarchy. In this regard the socially accepted value system and perceptions about nature and the natural system define the role of humans and their responsibility to live in harmony. The framework for conceptualization, as has been indicated by Berkes and Folke (1994), facilitates three-way linkages for incorporating social, institutional and cultural capital interaction. Cultural capital, as demonstrated here, is a driving force from the perspective of conservation. It refers to the factors that provide human societies with the means of adaptation to deal with the natural environment and to actively modify it. According to Hanna and Jentoft (1996), this domain itself is exclusively rich in perceptions that show how people see nature and its social significance, their behaviour, religion, customary practices, regulations and bondage.

Being articulated over generations, the cultural domain has become the key instrument that has enabled people to conserve the Adam's Peak wilderness in its sacredness. The strongest device has been the religious superiority associated with the 'sacred footprint'. The linkages have been articulated through the perceived values. It was noted that the bondage is stronger among the communities who live in the forest fringe than among others. It is also more rigid among the communities in the south, where the history of occupation is extremely long, compared with the north, where settlements were established as part of the plantation development in the nineteenth century. To what extent the territorial rules that are found in the social system and regulated through the principles of respect, commitment and reciprocity, could be used as instruments in conservation is an important question. The point demonstrated here is the ability of those culturally accepted systems to provide sufficient protection for the peak wilderness over millennia without any formal institutions, mechanisms and rules.

In the realm of the Adam's Peak sacred landscape there is a strong interface between the natural and social systems. The rules and regulatory measures are enforced through practices that are marked with strong social grounding. For instance, permission is sought before entering the sacred area on pilgrimage or for gathering forest produce. There is an understanding that any destruction, over-exploitation or wasteful extraction is a sign in itself. The short-term repercussions of destruction are believed to have many implications, including loss of access to resources, difficulty in finding a way out, injury and 'devil eyes', and in some cases death. The fear of violating the authority of the territorial god, Sumana Saman, is quite strong.

The conservation of the sacred mountain forest is facilitated through moral conduct without having any formal legislature. The system promotes an attitude towards observation and stewardship, to promote care and concern and avoid destructive attitudes. The righteous ruler is committed to providing a righteous watch, enabling natural processes to take place. Care, sympathy, concern, love and respect are considered meritorious. Moral responsibility for the conservation of all living things is instrumentalized through harmonious behaviour patterns, which are accepted as ethically rewarding. Seeds that produce plant life, branches that provide shelter and support, and trees that protect life are perceived as the generosity of nature and under territorial governance.

Local wisdom and traditional knowledge

These two interrelated aspects provide the basis for the cultural domain related to Adam's Peak. Local understanding, knowledge and experience have led to the establishment of measures and instruments for conservation. The local lifestyle itself demonstrates the ways in which people are expected to live in a 'holy area'. Every resource is exploited with respect, acknowledging the services needed for living in the terrain in harmony with nature. Similarly, the seasonal regimes related to climate and forest regeneration are self-learning. Seasons for harvesting, and also for pilgrimage, have been defined in relation to seasonality and the phenological cycle, but placing the power to enforce the territorial rules on superior powers. The ecologically sensitive, risk-prone areas have been noted as inaccessible, and by doing so people have been able to protect the diversity and maintain the aesthetically appealing natural environment.

Their knowledge about the diversity of the wilderness area includes spatial diversity, distribution of species, location of promising habitats and niches within the ecosystem. Resource extraction is guided by this knowledge and performed by following the most knowledgeable and experienced elderly people. If some areas or species are under threat of depletion, then these locations are not indicated for use. Sharing of resources has made it possible to continue the collective responsibility and also to transfer knowledge from one generation to other. Territorial occupation and the generations-long history are conditions that invoke a sense of ownership. It is also believed that to have their customary authority people themselves should

be capable of maintaining the knowledge, perceptions and linkages without fragmentation. Therefore the young generation are requested to follow their elders in gaining ancestral experience and knowledge.

From the perspective of conservation of this cultural landscape, which is superior to any other manipulated system, the strength of the local knowledge, regulation and practices need recognition. Those who revere the sacred mountain in their day-to-day life are the ones with a proper understanding of hierarchy and with a committed interest.

The cultural aspects of forest resource linkages

The human resource linkages of the wilderness area are widely known (Wickramasinghe, 1995). The forest is known to be the most crucial supplementary source of livelihood for thousands of forest fringe communities. The local food culture, knowledge, traditional therapy, healing and curing practices are the key driving forces influencing their use of forest resources. It is noted that local food culture, preference for forest produce and knowledge about food quality, availability, distribution and preparation are crucial elements. According to local women:

> There are no alternatives or substitutes for forest produce. The raw foodstuffs available here are diverse. Even the food preparations are quite different from what we see in other areas. We use varieties of medicinal species as beverages, crystal sugar made out of palm sap, greens, mushrooms, rhizomes, fruit and nuts, condiments, roots and kernels in our diet. The production cycle of the forest is quite apparent in the variation in diet all along the forest fringe.

This statement proved to be valid and well demonstrated in field investigations.

An analysis of field data gathered from thirty-six villages on a matrix linking perceived importance and practical use reveals two key features. The first is the formation of three dominant clusters in relation to high usage and importance. Food, beverages and medicinally useful products fall into these three clusters. Rather scattered patterns were noted for fuelwood, binding materials and all other products, indicating the tendency for high variations with increased availability of non-forest substitutes (Table 1).

The local food culture, being closely connected with forest products, is also influenced by local knowledge and preparation methods which have evolved over generations. The commanding position given to this sacred mountain forest in the hierarchy of the cultural landscape is also influenced by the local food culture. It is a system that caters for all human food needs through a process of self-regeneration without depending on human inputs. Therefore it is also considered as an added source of superiority.

Category/linkages	Patterns	Influencing factors
(1) Maintained through procuring food	Dominant cluster in relation to outstanding importance and use	Food culture Preference Local knowledge Preferred taste & value/quality Technology Food diversity Resource access & customary rights
(2) Maintained through procuring beverages	Clustering in relation to importance and use	Local culture Local knowledge Multiple benefits (food & medicinal) Preference Perceptions Resource access & customary rights
(3) Maintained through procuring medicinal products	Clustering in relation to importance and use	Traditional practices Traditional knowledge & experience Preventive & curative effects Perceptions & preferences Technology Resource access & customary rights
(4) Maintained through procuring fuelwood and binding materials	Scattered pattern with substantial use	Preferred quality Local knowledge Availability Resource access & customary rights

Conclusions and recommendations

The Adam's Peak wilderness occupies the anchor position among the cultural landscapes of Sri Lanka. It is rich in resources, powerful in guiding human life, strong in terms of perceptions, superior in terms of religion and the belief system, diverse in relation to the value system and sustainable in terms of natural processes and functional linkages. The intermixed ecological and cultural basis provides capital, which is worth investing in, for the conservation of the Adam's Peak wilderness as the anchor of Sri Lanka's cultural landscape. In this regard many instruments and measures are needed:

* Adam's Peak is characterized by unique features associated with the superiority added to the mountain forest through a strong value system of symbolic, material and nontangible relations. It deserves heritage status nationally and internationally, in a form that integrates the cultural and natural domains.
* A policy framework, institutional structures and mechanisms are needed to facilitate the integration of the cultural domain into conservation initiatives. Culture is not a peripheral issue, but central to conservation.
* The local innovations and initiatives reveal that the greater the emphasis placed on therapeutic values, the more social commitment and interest are found.
* Instruments for mediating cultural linkages need to be promoted in connection with the local context, including symbolic relations, social regulation, belief systems, and a sense of responsibility, which are often alienated from formal systems.
* In reinstating the eco-cultural basis an interdisciplinary approach needs to be followed to motivate the stakeholders, providing enabling opportunities for the grassroots.
* The state should play a facilitator's role while building social capital, through which community spirit and reciprocity can be promoted.
* There should be negotiations for a new partnership between communities, state agencies and non-governmental organizations to promote collective interest and commitment.
* The essence for the conservation of biodiversity comes from the cultural diversity that has been evolved through human linkages. It is characterized by five laws: genetic, seasonal, consequence action/response, and psychological, moral and spiritual potency.

References and further reading

Berkes, F. and Folke, C. 1994. Investing in cultural capital for the sustainable use of natural capital. A. M. Jansson, M. Hammer, C. Folke and R. Costanza (Eds.), *Investing in Natural Capital*, Washington. DC, Island Press.

Hanna, S. and Jentoft, S. 1996. Human use of the natural environment: an overview of social and economic dimensions. S. Hanna, C. Folke and K-Göran Mäler (Eds.), *Rights to Nature: Ecological, Economic, Cultural, and Political Principles of Institutions for the Environment.* Washington DC, Island Press, pp. 35–55.

Wickramasinghe, A. 1995. *People and the Forest: Management of the Adam's Peak Wilderness*. Battaramulla, Sri Lanka, Forestry Information Services, Sri Lanka Forest Department.

Wickramasinghe, A. 1997. Anthropogenics related to forest management in Sri Lanka. *Applied Geography*, Vol. 17, No. 2, pp. 87–110.

Wickramasinghe, A. 2003*a*. Adam's Peak Sacred Mountain Forest. C. Lee and T. Schaaf (Eds.), *The Importance of Sacred Natural Sites for Biodiversity Conservation*. Paris, UNESCO, pp. 101–10.

Wickramasinghe, A. 2003*b*. Conservation innovations of peripheral communities: case study of Adam's Peak Wilderness. *Journal of the National Science Foundation of Sri Lanka*, Vol. 31, Nos. 1 and 2, pp. 105–23.

Session 2

Sacred landscapes, biodiversity and traditional resource use

The sacred geography of the Sierra Nevada de Santa Marta: offerings, conflict and environmental awareness

Guillermo E. Rodriguez-Navarro, Corporación Caja de Herramientas, Colombia

Introduction

The Sierra Nevada de Santa Marta (SNSM), designated a UNESCO Biosphere Reserve in 1979, is an isolated mountain set apart from the Andes mountain chain which runs through Colombia. Reaching an altitude of 18,942 ft (5,775 m) above sea level just 26 miles (42 km) away from the Caribbean coast, SNSM is the world's highest coastal peak. It encompasses about 4.2 million acres and is the source of thirty-six main rivers. It also comprises two National Parks (Sierra Nevada de Santa Marta and Tairona), and three large-scale and five small-scale indigenous reserves. Due to its altitudinal variation as well as its location at 11 degrees latitude north, the Sierra Nevada contains samples of all of the climatic zones that can be found in the tropical Americas.

The native population of the SNSM consists of about 32,000 members of the indigenous groups Kogi, Arhuaco, Arsario and Kankuamo, descendants of the Tayronas and guardians of their ancient traditions. There are also approximately 150,000 peasants and one and a half million urban dwellers in the lowlands. The four indigenous groups are the only native, established people. Despite speaking different languages, these groups share a single belief system. From before the arrival of the Spanish, the indigenous people of the Sierra Nevada have had a world view, social organization and a settlement pattern that revolve around management and conservation of a unique ecosystem that they call the 'Heart of the World'.

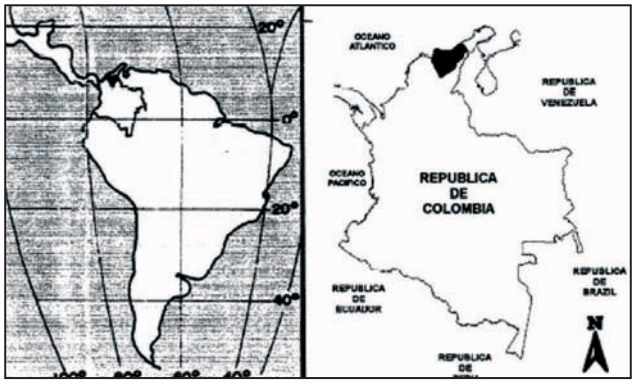
According to indigenous accounts of the earth's creation, the area around the Sierra was a circular territory with high mountains at its centre and a border, called the 'black line', extending to the ocean where the water cycle ends. This territory is the centre of the world and home to the Mother's children who live off her and care for her water sources, lands and sacred sites. Few people appreciate the philosophical depth of the indigenous understanding of the natural world, but negative attitudes towards indigenous knowledge are changing. Currently there is better appreciation of the effectiveness of indigenous resource management systems. Sustainable management of mountain resources is a vital means for the recovery of its sacred geography.

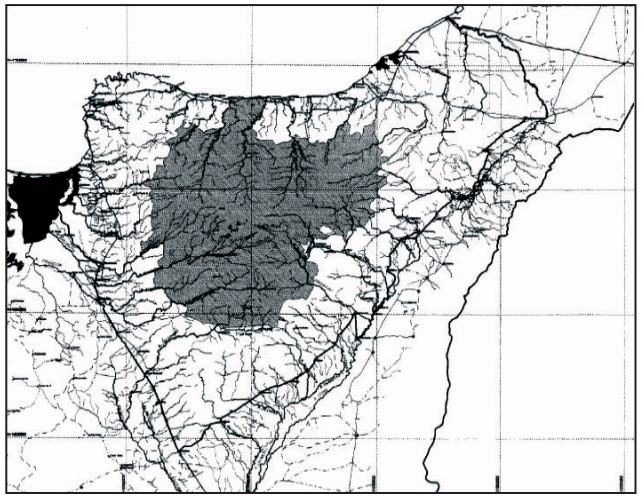
The black line

The indigenous territory is limited by the 'black line', but what is the 'black line'? It is an indigenous term that has given rise to multiple interpretations. It has even been said that it refers to the paved road that surrounds the Sierra in many parts, connecting the three departments La Guajira, Cesar and Magdalena with jurisdiction in the Sierra Nevada. Nothing can be further from reality. In a general meeting celebrated in Bunkuwageka, the traditional authorities divulged the sacred points that the aforementioned 'black line' united, which in their own beliefs and concepts comprise their territory (Figures 1 and 2).

The following is the interpretation given to the parts and points of the 'black line':

1. *Kas'simuratu*. Convent in Plaza Alfonso López de Valledupar, Cesar. Place of offerings 'Yuwangawi'.
2. *Kickiaku*. Bridge over Salguero from the Cesar River, door of illness.
3. *Karakui*. Up Cesar River to Guacoche, door of illness of the left.
4. *Bunkwa Nariwa*. Up river to Badillo, where offerings are made for illness in general.
5. *Bunkwa Nariwa*. From Badillo in the direction of los Aticos, mothers of animals and water.
6. *Imakamuke*. From los Aticos in the direction of San Juan del Cesar, mother of the air, water, lightning and thunder.
7. *Jwiamuke*. From San Juan del Cesar to Fonseca. Mother of the hurricanes and storms.
8. *Seamuke*. From Fonseca to Barrancas. Offerings for illness.





Indigenous reserve — the Black line

9. *Kukuzha*. From Barrancas to Hatonuevo. Offering for any animal or person.
10. *Unkweka*. From Hatonuevo to Cuestecita. Offering for the sap of the trees.
11. *Java Shikaka*. From Cuestecita in the direction of Riohacha, until the mouth of Ranchería.
12. *Jaxzaka Luwen*. From Riohacha to Camarones. Place to collect stones for a successful marriage.
13. *Alaneia*. From Camarones to Punta de los Remedios. Mother of the Sun.
14. *Zenisha*. From Punta de los Remedios to Dibulla. Mother of the food produced in the Sierra, interchange of sea materials for offerings.
15. *Mama Lujwa*. From Dibulla to Mingueo, until the mouth of the Cañas River. Mother of the large pots (tinajas). Potter.
16. *Jukulwa*. From the mouth of Cañas River, to the mouth of Rio Ancho. Mother of the animals; there are three lagoons for offerings for illness.
17. *Jwazeshikaka*. From the mouth of the Río Ancho to Jwazeshikaka Hill. Mother of the stone beads.
18. *Java Kumekun Shikaka*. From Jwazeshikaka hill to the mouth of the Palomino River. Mother of all the flowers.
19. *Jate Mixtendwe Lwen*. From the mouth of the Palomino River to Jate Mixtendwe Lwen hill. Mother of the dances.
20. From Jate Mixtendwe Lwen hill to the mouth of the Don Diego River, Java Mitasma. Mother of the pigeons.
21. *Java Mutanni*. From the mouth of Buritaca River to the mouth of the Guachaca River. Mother of all the four-legged animals.
22. *Jate Telugama*. From the Guachaca River to Tairona National Park. Mother of gold.
23. *Java Nakumake*. From Tairona National Park to Chengue. Mother of salt.
24. *Java Julekun*. From Tairona National Park to Taganga. Mother of the Zirichu.
25. *Java Nekun*. From Taganga to the docks in Santa Marta. Mother of the spiritual authorities.
26. *Java Siñigala*. From Santa Marta to Ciénaga. Mother of the *Sokunu nego*.
27. *Java Ñinawi*. From Ciénaga to the mouth of Frío River. Mother of the lions.
28. *Java Waskañi Shikaka*. From the mouth of Frío River to the mouth of the Sevilla River.
29. *Java Katakaiwman*. From the mouth of the Sevilla River to the mouth of the Tucurinca River. Mother of everything that exists in the world.
30. *Kwarewmun*. From the Tucurinca River to the town of Aracataca. Mother of the mud.
31. *Seynewmun*. From the town of Aracataca to Fundación. Mother of the mortuary of all the beings.
32. *Mama Neyumun*. From Fundación to the Ariguaní River. Mother of earth.
33. *Ugeka*. From the Ariguaní River to El Copey. Offering to prevent war.
34. *Miakun*. From El Copey to Bosconia (Camperucho). Mother of fertility.
35. *Ku¨riwa*. From Bosconia to Caracolí. Door where the wild animals are controlled.
36. *Gunkanu*. From Caracolí to Mariangola. Offerings for the spiritual paths or roads.
37. *Gwi´kanu*. From Mariangola to Aguas Blancas. Offerings to control illness.
38. *Ka´aka*. From Aguas Blancas to Valencia de Jesús. site Site of offerings to control death.
39. From Valencia de Jesús to Valledupar, the starting point.

These thirty-nine references give the limits to the Sierra's indigenous territory, which were agreed to by the four different indigenous groups. Many violent conflicts are about disputes over resources between the mountain and

Fig. 1 Location of Sierra Nevada de Santa Marta Biosphere Reserve, Colombia [above]
Fig. 2 Location of the indigenous reserve and demarcation of the Black line
Source: South-South Co-operation Programme on environmentally sound socio-economic development in the Humid Tropics. Working Papers No. 30. 1999, UNESCO [below]

lowland communities. Mountain communities have limited resources, and their relations with the lowlands can change and rapidly deteriorate. From the time of their first contact with the Western world, indigenous peoples have suffered from plunder and destruction of their territories, sacred sites, cemeteries and ancestral customs. The case of the Kogi people is described here in some detail to illustrate the general situation of indigenous peoples in the Sierra. They have been forcibly displaced several times, even as recently as the 1960s, and now live in the Don Diego river basin.

Lineage plays an important role in the complex, hierarchical indigenous society, and it is always related to a territory. The real decision-making power over personal and community affairs lies in the hands of priests, or *Mamas*, who plan the farming calendar and distribute lands and crops according to lineage. They are responsible for the delicate balance between man and nature. This balance does not only encompass basic resources such as water, forests or crops but extends to the moral and spiritual balance of individual community members. Kogi society, for example, is strictly hierarchical. At the top we find the *Mamas*, or priests, whose education is one of the most striking features of their society.

Ideally, the future priests are chosen by divination and trained from birth. The training lasts 18 years and takes place in special temples in the Sierra. When they return to society as *Mamas* at around the age of 20 they may be trained to lead the community in moral and spiritual ways, but they lack all practical knowledge. Their simple but profound training prepares them for the task of preserving the universe. Practical matters are left to the *Comisario* or the mayor, who works together with the *Mama*. *Cabos* are assistants to the *Mamas* and the *Comisarios* and have less authority. *Mayores* is a term given to elder men of good reputation whose status gives them authority over their peers and the younger generation.

Mamas, *Mayores*, *Cabos* and *Comisarios* are in close contact with nature and have a clear sense of how to maintain the cycles that rule the ecosystems. Their unique belief system provides the base for indigenous biodiversity management practices. It stems from a complex offering system in which each individual holds custody of a sacred territory. An over-simplified classification of the offering system is provided here to help understand the highly complex nature of indigenous land management in the Sierra Nevada. There appear to be three distinct types of offering. The first comprises a set of rituals that maintain natural cycles. These are performed by offering stone beads, which are buried, thrown into the sea, or hidden in small caves or cracks in fields or snowy peaks. The second type of offering is made to atone for personal faults. The third type acts as payment for the use of natural resources with unpredictable yield. One example dealt with the use of trees for the construction of a bridge. In a complex ceremony, tree seedlings were cleaned, scattered in the forest, and then given spiritual nourishment (Pedro Sundenkama, Kogi community, personal communication).

While the scientific perspective differs from the traditional, both have much to offer each other. Combining the two is the best way to achieve a better understanding of nature. However, it is still difficult to establish an atmosphere of trust with the indigenous people of the Sierra Nevada of Santa Marta and to take part in their knowledge and belief systems. This can only be attained through long-standing cooperation.

The situation of the indigenous people is critical, more so now than ever before. The intense territorial dispute between guerrillas and paramilitary groups is having a disruptive impact on ancestral culture. Traditionally, communities had access to a variety of ecosystems of different temperature and altitude. This enabled them to build a self-sufficient economy which supplied products ranging from salt and fish from the lowlands, to potatoes and medicinal plants from the cold highlands. Today the mobility of communities is severely restricted by paramilitary groups in the lowlands and foothills, and by guerrillas in the mid- and highlands of the Sierra.

The conflict has intensified over the last five years and this has worsened the situation for the communities. This has not only caused a fracture in their production systems,

it has also restricted, or even totally precluded, access to vital cultural places including sacred sites. Communities have had to abandon their lowland territories and retreat to higher grounds. These displacements are ever more frequent, and the obstruction of access to the lowlands has affected the capacity to build up stocks. The most isolated communities now run the risk of starvation.

Wherever ecological conditions are fragile, peace is fragile too. Resources must be shared to prevent conflicts. Time has arrived for our industrialized society to learn from indigenous societies, to incorporate moral values and develop an ecological understanding that is reflected in its social and economic measures. Knowledge should become a part of our way of life, and post-modern humanity needs a new approach to development in which basic resources are protected and the survival of our planet is assured. Participatory management, adaptive mechanisms and regulations for accessing resources and attainment of a new set of conditions are the most sustainable and realistic ways of reaching solutions.

The spiritual significance of our territories is being lost. Only by better understanding natural phenomena and the effects of our 'toys', as the indigenous people call our technological developments, will we be able to gain a more respectful view of nature, and perhaps recover the real meaning of our territories and lives.

The role of sacred sites is basic to recover the spirituality of the territory. Sacred sites also provide a way to establish a set of rules and regulations about the management and preservation of these areas, totally connected with the belief systems of the indigenous population.

References and further reading

Arhem, K. 1990. Ecosofía Makuna. F. Correa (ed.), *La selva humanizada, ecología alternativa en el trópico húmedo colombiano*. ICAN-FEN-CEREC, Bogotá, pp. 105–22. (In Spanish.)

Murrilo-Sencial, Z. 1997. La Mata de Ahuyama: sistemas anímicos y clasificaciones totémicas. A. Colajanni (ed.), *El Pueblo de la Montaña Sagrada: tradición y cambio*. Santa Marta, Colombia, Ricerca e Cooperazione, pp. 139–49. (In Spanish.)

Reichel-Dolmatoff, G. 1950. Los Kogui: una tribu de la Sierra Nevada de Santa Marta, Colombia, *Revista del Instituto Etnológico Nacional (Bogotá)*, Vol. 4, No. 1–2, pp. 1–32. (In Spanish.)

Reichel-Dolmatoff, G. 1953. Contactos y cambios culturales en la Sierra Nevada de Santa Marta, *Revista Colombiana de Antropología*. 1, pp. 17–112. (In Spanish.)

Reichel-Dolmatoff, G. 1976. Cosmology as ecological analysis; a view from the rain forest. *Man* 2, London, pp. 307–18.

Reichel-Dolmatoff, G. 1980. Notas sobre el simbolismo religioso de los indios de la Sierra Nevada de Santa Marta, *La Antropología Americanista en la Actualidad*, 1, México, pp. 525–40 (In Spanish.)

Reichel Dolmatoff, G. 1982. Cultural change and environmental awareness: a case study of the Sierra Nevada de Santa Marta, Colombia, *Mountain Research and Development*, Vol. 2, No. 3, pp. 289–96. Boulder, Colorado.

Rodríguez-Navarro, G. E. 1988. La tradición indígena un aporte innovador en el manejo de los recursos naturales. J. Hahn and A. Marcos (Eds.), *Foro sobre Tecnologías Apropiadas y Conservación de Recursos Naturales*. Barranquilla, Colombia, Universidad del Norte, pp 25–31. (In Spanish.)

Rodríguez-Navarro, G. E. 1999. Evidencias prehispánicas y prácticas tradicionales indígenas en las cuencas altas de los rios Guachaca y Buritaca: un estudio de caso en el establecimiento y manejo de áreas de amortiguación en la Sierra Nevada de Santa Marta, Colombia. M. Liberman and C. Baied (Eds.), *Desarrollo sostenible de ecosistemas de montaña: manejo de áreas frágiles en los Andes*, pp.365–374. La Paz, United Nations University UNU, Liga para la Defensa del Medio Ambiente (LIDEMA) and Instituto de Ecologia. (In Spanish.)

Rodríguez-Navarro, G. E. 2000*a*. Sacred Forests in the Sierra Nevada de Santa Marta, Colombia. M. F Price and N. Butt (Eds.), *Forests in Sustainable Mountain Development: A State of Knowledge Report for 2000*. IUFRO research series no. 5, Oxford, UK, pp. 128–30.

Rodríguez-Navarro, G. E. 2000*b*. Indigenous knowledge as an innovative contribution to the sustainable development of the Sierra Nevada of Santa Marta, Colombia, *AMBIO*, Vol. 29, No. 7, pp. 455–58.

Rodríguez-Navarro, G. E. 2002. Spiritual significance and environmental effects of offerings amongst the indigenous people of the Sierra Nevada de Santa Marta, *Mountains of the World, International Symposium in Preparation for the International Year of Mountains* (IYM2002), Community Development between Subsidy, Subsidiarity and Sustainability. World Mountain Symposium, Interlaken, Switzerland. Swiss Agency for Development and Co-operation, Centre for Development and Environment, University of Bern, April 2002.

Rodríguez-Navarro, G. E. 2003. *Conflicto significado espiritual y efectos ambientales de las ofrendas entre los indígenas de la Sierra Nevada de Santa Marta. Dimensiones territoriales de la guerra y la Paz en Colombia.* Bogotá DC, Universidad Nacional. (In Spanish.)

Serje, M. 1987. Arquitectura y urbanismo en la Cultura Tayrona. *Boletin del Museo del Oro*, No. 19, pp. 87–96. (In Spanish.)

Fig. 3 Village in the Sierra Nevada Biosphere Reserve [left]

Fig. 4 Filming with village children [right]

Biodiversity and cultural heritage in sacred sites of West Timor, Indonesia

Herwasono Soedjito, Indonesian Institute of Sciences, Indonesia

Summary

There are a great many sacred sites all over Indonesia that are related to diverse cultural identities. The oldest written document found in Indonesia concerning a sacred conservation site was inscribedon a stone in *Prasasti Malang* in East Java in 1395 during the Majapahit kingdom. Arca Domas, a sacred site in West Java, was supported by the colonial Dutch government and officially given protected status in 1921. Since Indonesian independence in 1945, the existence of sacred sites has continuously been appreciated. For example, *Tanah Ulen*, a variant of the concept of sacred sites, is still practised in Kalimantan by the Dayak people. As in Kalimantan, the people of West Timor are also implementing the sacred site concept to conserve biological diversity and ensure that their descendants inherit their culture.

However, many sacred sites are being exploited for agriculture and industry even though they have a high social and cultural value for local communities. These sacred sites not only maintain biological diversity and provide goods for ritual and cultural festivals, but more importantly they provide water to sustain life. Water is limited in the West Timor region, the study site only receives about 1,097 mm of precipitation per year. Almost all sacred sites have springs and this was often the main reason, among others, to protect the area.

A study of ten sacred sites in Oelolok, Insana subdistrict, West Timor revealed that there are 189 different plant species growing in the area. An inventory from three transects outside the sacred sites only recorded forty-six plant species, and only fifteen species that grow both in the sacred site and the non-sacred sites. It is undeniable that the sacred site has an important role in conserving biological diversity. Unfortunately, these sacred sites are decreasing, and more could be lost if development policy continues to be based only on an economic-materialistic viewpoint. To save these sacred sites help is needed not only from the Indonesian government, but also from international communities such as UNESCO's Man and Biosphere (MAB) Programme and the United Nations University (UNU).

Introduction

There are a great many sacred sites all over Indonesia that are related to diverse cultural identities. The oldest written document found in Indonesia concerning a sacred conservation site was inscribed in *Prasasti Malang* (that is, on a stone) in East Java in 1395 during the Majapahit kingdom (Wiratno et al., 2001). Arca Domas, a sacred site in West Java, was traditionally only protected by local people, but it was officially conserved by the colonial Dutch government and given formal protected status in 1921. This is only one example of local wisdom being appreciated and used as a lever to create higher-level legal regulation. After Indonesia became independent in 1945, the existence of sacred sites has continuously been appreciated. One example is *Tanah Ulen*, a variant of the concept of sacred sites that is still being practised in Kalimantan by the Dayak people. As in Kalimantan, the people of West Timor are implementing the sacred site concept to conserve biological diversity and ensure that their descendants inherit their culture.

The people of Dawan in West Timor culturally protect a special landscape for their sacred sites. They live in the Insana district of north-central Timor, and their sacred sites are closely related to the existence of spring water. This is their main reason for conserving these mostly forested areas (Naiola, 2002; Waluyo 2003). The island of Timor is a part of the Lesser Sundas, and deciduous monsoon forest occurs there in seasonally dry areas. In addition, the sacred

areas provide local people with protein from hunting game, materials for festivals and rituals, and supply other special needs for their livelihood (Naiola, 2002; Waluyo 2003).

In general, the natural condition of West Timor gives it a drier climate and poorer soil fertility than other places in western Indonesia. The population density was 67 per square km in 1997, with a growth rate of 1.4 per cent per year. Under the impact of population pressure as well as the relatively poor soil condition, the people cleared more forested land for agriculture and pasture in order to increase their income. It was reported that in the single month of July 1999, 210 ha of forest was cleared by people in the area. This forest is protected in theory. In the same month another 182.5 ha of protected forest was destroyed to create quarries for the marble industry. Naiola (2002) reported that increasing deforestation caused by the marble industry will destroy wildlife. Many springs will run dry, and in the long run many species of plants and animals will be lost.

Deforestation also creates the fragmentation of ecosystems. To some degree the existence of small sacred sites was the result of the fragmentation of the earlier continuous forest. Even though this phenomenon endangered the existence of plants and animals, the remaining sacred sites can be used as a store for biodiversity, as it plays host to a great number of species.

The study of the sacred sites of the Dawan people in West Timor, discussed below, was aimed at proving that sacred sites have an important role in conserving biodiversity and maintaining the cultural heritage of many Indonesian peoples.

General background

Indonesia is the world's largest archipelago, containing more than 17,000 islands stretching in an east–west direction for 5,200 km across the Sunda and Sahul continental shelves. The archipelago exhibits a biological diversity and richness that is without comparison in Asia (FAO, 1982–83; McNeely et al., 1990; Petocz, 1989; Scott, 1989). The principal islands are Sumatra, Java, Kalimantan (Borneo), Sulawesi and West Papua (Indonesian Papua).

Indonesia's territory covers 7.7 million sq km, approximately 5.8 million sq km (75.3 per cent) of which comprises marine and coastal waters. Indonesia bridges two of the earth's biogeographic realms, Indo-Malaya and Oceania. The Indo-Malayan region in the west consists of Sumatra, Kalimantan, Java and Bali, and the Australian region to the east consists of Sulawesi, the Moluccas, the Eastern Sunda Islands and West Papua. The vegetation types to the east and west of the 'Wallace line' are divided by a biogeographic boundary that extends from north to south along the Sunda Shelf. The natural vegetation on the shelf itself is principally Malesian, dominated by the commercially important *Dipterocarpaceae*. The species found to the east have greater affinities with the Austro-Pacific realm and are dominated by mixed tropical hardwoods. Deciduous monsoon forest occurs in seasonally dry areas, particularly on the southern and eastern islands such as the Lesser Sundas and the southern part of Papua. Altogether, the 'outer' islands of Sumatra, Kalimantan, Sulawesi, the Moluccas and Irian Jaya contain approximately 10 per cent of the world's total area of tropical rainforest. McNeely et al. (1990) stated that Indonesia possesses more tropical forest than any other single African or Asian country, and is second only to Brazil worldwide in its area of tropical forest. Unfortunately deforestation in Indonesia is proceeding at an alarming rate. Indonesia's forest cover decreased from about 193.7 million ha in 1950s (Hannibal, 1950), to 119.7 million ha in 1985, 100 million ha in 1997 (GOI/World Bank), and only 98 million ha in the early 2000s (FWI/GFW, 2001).

Characterized by an enormously varied physical structure of high mountain ranges, volcanoes, alluvial plains, lakes, swamps and shallow coastal water, Indonesia has at least forty-seven distinct natural and anthropogenic ecosystems (Sastrapradja et al., 1989). They range from ice mountain ecosystems and alpine grassland on the high mountains of Papua (with an altitude higher than 5,000 m above sea level, to a variety of tropical rainforest ecosystems on land stretching from lowlands to mountains. They include shallow swamps and deep lakes, mangroves, algal communities and coral reefs, as well as ocean ecosystems as deep as 8,000 m below sea level (MoF/FAO, 1991).

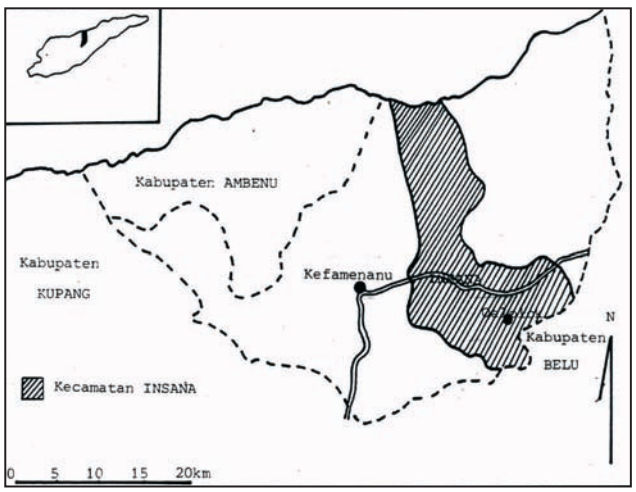
Indonesia not only has high biological diversity, it also embraces a high cultural diversity. More than 400 Indonesian ethnic groups are dispersed across its different regions. The indigenous religion, as part of the indigenous culture, can be seen as the product of interaction between people and the environment.

The high biological diversity has an important role in the sociocultural life of the Indonesian people. Some of this cultural resource has been utilized economically, but in large part this national asset has not been developed yet. The dynamic interaction between the biological diversity and the Indonesian people has created many different cultures, languages and dialects. Indonesia has 665 different languages and dialects. On West Papua alone 250 different languages are spoken, the Moluccas host 133, Sulawesi 105, Kalimantan (Indonesian Borneo) seventy-seven, Nusa Tenggara (the Lesser Sunda Islands) fifty-three, Sumatra thirty-eight, and on Java and Bali there are nine different languages and dialects (Ethnoloque, 2005). However, this high cultural diversity has been ignored over the years, and many of the languages once spoken are already lost. It is essential that research is undertaken to document the languages and learn the traditional wisdom of their speakers, not least because some of them are

highly compatible with sustainable development. This was a mandate of the World Summit on Sustainable Development in Rio de Janeiro 1992 as well as the Rio +10 Summit held in Johannesburg in 2002.

Site and results of the study

The study site is in the Insana district of north-central Timor (9°02′48″–9°37′36″ S, 124°04′02″–124°46′00″ E), Indonesia. The Insana district is inhabited by the Dawan ethnic group, who practise swidden agriculture, raising animals and hunting in the savannas (Figure 1). It has mostly hilly and mountainous topography, and soil classified as latosol, glumosol and complect soil. The climate is extremely dry, with a rainfall total of 1,148 mm falling on an average of 72 days per year. The average precipitation is 3.5 mm per month in the dry season and 215 mm per month during the wet season.



Site code	Name	No. of species	No. of genera
A (sacred)	Wemean	22	21
B (sacred)	Alkani	39	32
C (sacred)	G. Mandeu	30	27
D (sacred)	Simulu	24	22
E (sacred)	Laran Tetun	26	21
F (sacred)	Nualain	21	15
G (sacred)	Raihuli	47	44
H (sacred)	Lahurus	26	23
I (sacred)	Webot	31	28
J (sacred)	Takirin	38	33
K (non-sacred)		30	30
L (non-sacred)		26	26
M (non-sacred)		17	16
	InsanaForest (Protected forest)	57	57

Fig. 1 Study sites of Insana and Oelolok in Belu district, West Timor, Indonesia

Tab. 1 Species diversity inside and outside study sites (both sacred and non-sacred sites)

The Dawans' sacred sites still maintain a high biodiversity even though some of the sites have a relatively small area (between 1 and 2 ha). As indicated in Table 1, many of them are monospecies: that is, few if any other species of the same genera are found. For example, Naiola (2002) reported that in Fatu, a sacred geological structure nurtured eleven species of traditional medicines that belong to eight genera and eight families. Therefore, the sacred sites are the last resort for many species that are already endangered on Timor island.

The locally specific species distribution within sacred sites is also revealed from an analysis of the similarity index. It shows that there is an overlap of species between sacred sites and non-sacred sites of less than 50 per cent, with the exception of sites K and L (IS = 57.1) both of which are in the non-sacred category. Site D (Simulu) hosted entirely different species (IS = 0) from all the non-sacred sites (K, L and M), and so did site I (Webot) from sites L and M. Within the sacred site category, the highest similarity index was between A (Wemean) and E (Laran Tetun), followed by I (Webot) and J (Takirin) (IS = 34.8) and A (Wemean) and C (G. Mandeu) (IS = 30.8).

The high degree of endemic species distributed within these small sacred areas indicates that the there should be legal measures taken to conserve West Timor's sacred sites, so that all important relict species are strongly protected. These sacred sites must be protected not only for biodiversity conservation but more importantly to preserve the cultural values they embody. The Dawan people believe that their ancestors or god created all *Fatus* (sacred sites) to provide water for them. This belief is central to their lives, and many ceremonies derive from it. The traditional *Fatus* conserve geographical formations such as limestone outcrops, small natural ponds with their unique biota, caves and other particular landscapes.

The sacred sites could also be interpreted as a means to maintain microclimates and preserve the habitats where different organisms live. A great number of potentially edible fruits and vegetables, building materials and medicinal plants grow in these sacred sites, and they contain many wild animals. However, this is not only typical for West Timor as the same conditions have been recorded from different parts of the Indonesian islands (Bakels and Persoon, 1998).

Economic development and political change, leading to a policy of more autonomy, have speeded up the rates of deforestation and destruction of sacred sites. Overexploitation of the most famous forest product of West Timor, sandalwood, is still going on. The conversion of forest to monospecies plantations has destroyed many forest ecosystems, and so have the cement and marble industries. There is a possibility for district political policies to have an impact in preventing not

only the loss of sacred sites but also the loss of biodiversity, and in promoting natural regeneration.

To save these sacred sites, help is needed not only from the Indonesian government, but also from international communities such as UNESCO-MAB and UNU.

References and further reading

Bakels, J. and Persoon, G. A. 1998. Ecology and symbolism: the sacred forest of the Baduy (West-Java, Indonesia). *Abstract of Natural Sacred Sites: Cultural Diversity and Biological Diversity*. Proceedings of the International Symposium held by UNESCO, the French National Council for Scientific Research (CNRS) and Muséum National d'Histoire Naturelle (MNHN), Paris, 22–25 September 1998, p. 8.

Brill. E. J., Sastrapradja, D. S., Adisoemarto, S., Kartawinata, K.,. Sastrapradja, S. and Rifai, M. 1989. *Keanekaragaman Hayati Untuk Kelangsungan Hidup Bangsa* (Indonesia: biological diversity for sustainable life of the nation). Bogor, Pusat Penelitian dan Pengembangan Bioteknologi and LIPI.

Ethnologue: Languages of the World. 2005. Gordon, Raymond G., Jr. (ed.) Fifteenth edition. Dallas, Texas. SIL International. Online version: http://www.ethnologue.com/

FAO. 1982–83. *A National Conservation Plan for Indonesia*. 8 vols. UNDP/FAO National Parks Development Project INS/78/061. Bogor, Food and Agriculture Organization of the UN.

FWI/GFW. 2001. *Potret Keadaan Hutan Indonesia. Bogor*, Indonesia, Forest Watch Indonesia and Washington DC, Global Forest Watch.

Hannibal, L. W. 1950. Vegetation map of Indonesia. Planning Department, Forest Service, Jakarta. In: International Institute for Environment and Development and Government of Indonesia. *Forest Policies in Indonesia: The Sustainable Development of Forest Lands*, Vol. 3, No. 4, 30 November 1985. Wahington DC. GOI /IIED (Govt. of Indonesia)/ (International Institute for Environment and Development).

McNeely, J. A., Miller, K. R., Reid, W. V., Mittermeier, R. A. and Werner, T. B. 1990. *Conserving The World's Biological Diversity.* Gland, Switzerland, and Washington DC, World Conservation Union (IUCN)

MoF/FAO. 1991. Indonesian Tropical Forestry Action Programme. Jakarta, Indonesia: Ministry of Forestry and the Food and Agriculture Organization of the United Nations.

Naiola, B. P. 2002. 'Fatu' Sebagai Sumber dan Habitat Konservasi Biodiversitas Tumbuhan Obat Tradisional di Pilau Timor (Indonesia: 'fatu' as an habitat for conservation of traditional medicinal plant diversity in Timor Island). *Proceedings of the Symposium 'Nasional II Tumbuhan Obat dan Aromatik*'. Bogor, Kehati, Lembaga Ilmu Pengetahuan Indonesia (LIPI), Asia Pacific Information Network on Medicinal and Aromatic Plants (APINMAP), UNESCO and Japan International Cooperation Agency (JICA), pp. 488–91.

Petocz, R. G. 1989. *Conservation and Development in Irian Jaya: A Strategy for Rational Resource Utilization*. Leiden, Netherlands.

Scott, D. A. (ed.). 1989. *A Directory of Asian Wetlands*. Gland, Switzerland and Cambridge, UK, IUCN.

Siagian, M. H. 2000. *Jenis-jenis Tumbuhan yang digunakan Sebagai bahan Obat Tradisional oleh Suku Dawan di Desa Oinbit, Kec. Insana, TTU, NTT* (Indonesia: species of plants use as medicine material by Dawan People in Oinbit Village, Insana Sub-district). Laporan Teknik Proyek Penelitian Pengembangan dan Pendayagunaan Potensi Wilayah. Puslitbang Biologi-LIPI.

Waluyo, E. B. 2003. The spatial environmental organization and the life of Dawan people in Timor, Indonesia. *Journal of Tropical Ethnobiology*, Vol. 1, No. 1, pp. 31–39.

Wiratno, D., Indriyo, A., Syarifudin, A. and Kartikasari. 2001. *Berkaca di Cermin Retak: Refleksi Konservasi dan Implikasi Bagi Pengelolaan Taman Nasional*. Jakarta, Gibbon Foundation Indonesia, PILI-NGO Movement and Forest Press.

Sacred hidden valleys and ecosystem conservation in the Himalayas

Lhakpa N. Sherpa, The Mountain Institute, Nepal

Summary

This paper focuses on the concept of *beyul* or sacred hidden valleys. *Beyul* contain many smaller sacred sites within their boundaries. Sacred natural sites vary in their spiritual values and spatial scales. It is argued that the biodiversity conservation functions of a sacred site increase with increasing size. Large hidden valleys can therefore play an important role in biological diversity conservation. The large areas possess the capacity to accommodate wide-ranging species, and can accommodate the impacts of major disturbances better that smaller sites.

The *beyul* are found throughout the Himalayas where Buddhist communities exist. They are mainly inhabited by people of Buddhist origin who hold a deep respect for nature. Human habitation make *beyul* an ideal place as an integral component for managing ecosystems with people. Unfortunately, the *beyul* concept is becoming weaker. These areas are being selectively targeted for establishing protected areas without proper recognition of their role in the community and environmental conservation. Modern development, education, globalization and tourism also do not lend support to the *beyul* concept.

There is an opportunity for advancing ecosystem conservation in the Himalayas by promoting the concept. This requires research, documentation, interpretation and education on *beyul* and sacred natural sites by involving local experts and spiritual leaders.

Introduction

Many cultures around the world consider some features of the natural landscape as sacred, such as trees, forest groves, lakes, springs, rocks and mountains. The concept of sacred natural sites is particularly strong among indigenous peoples such as, among others, the Native Americans of the United States of America, Aboriginal people of Australia, Maoris of New Zealand, Dai minorities of China, and the Hawaiians. Many religious groups also attribute sacred values to natural sites. Sacred mountains for example can be found among many cultures and religions around the globe. Mounts Sinai and Zion in the Middle East, Olympus in Greece, Khangebo and Tai Shan in China, Fuji in Japan, Kangchenjunga in Sikkim and Jomolangma in Nepal are examples. Some mountains such as Kailas of Tibet are sacred to Hindus, Buddhists, Jains and Bons alike. Similarly, Adams Peak in Sri Lanka is revered by Hindus and Buddhists as well as Muslims.

The reason for and levels of sacredness may vary from site to site and culture to culture. Sacred natural sites also vary in their physical characteristics and spatial dimensions, depending on whether they comprise a single tree or an entire forest, a small local spring or an entire length of river. The role of sacred natural sites in shaping people's attitude to environment is strongly appreciated.

This paper focuses on the Buddhist concept of sacred natural sites in the Himalaya region, with particular emphasis on the hidden valleys, known as *beyul*, and their role in biodiversity conservation. In most cases, the area covered by a sacred natural site is difficult to determine because they have a fuzzy sphere of influence or a mental map rather than a distinctive boundary on the ground. Some sacred sites cover large areas while others are only few square metres in size. Nevertheless, the ecosystem conservation function of a sacred natural site will increase with increasing size of the site.

Fig. 1 A view of the Himalayas [right]

Fig. 2 Goddess Jomolangma: one of the sisters of long life. In Tibetan Buddhism the Goddess resides in the Khumba – the highest mountain in the world [next page]

The hidden valleys of the Himalayas

Beyul are hidden valleys in the Himalayas, attributed to Padmasambhava, an Indian saint responsible for introducing Nyingmapa Buddhism to Tibet during the eighth century. Nyingmapa is the oldest Buddhist sect, and has a rich tradition of respecting natural sites such as mountains, trees, springs and rocks. The concept of the sacred hidden valley is particularly unique and interesting from the perspective of biological diversity conservation. It is believed that Padmasambhava through his spiritual powers hid many valleys throughout the Himalayas to provide refuges for people suffering from the impacts of war, famine and other threats such as religious persecution which threatened their survival.

The Himalayas are the youngest, highest and geologically

most active mountain chain in the world. The Himalayan range extends from northern Pakistan in the west to Myanmar in the east, with a total distance of approximately 2,800 km. Along the way it passes through Northern India, Nepal, the south-west Tibetan plateau, Sikkim, Bhutan and the Yunan Province of China. The *beyul* are mostly located on the southern flanks of the main Himalayan divide. These are in accessible valleys enclosed by mountain ranges, with limited and obscure entry points through narrow river gorges or over high mountain passes. It is believed that *beyul* can be opened only with the aid of *terma* (sacred texts or books) describing major landmarks and the direction into the site, also known as *lam-yig* or *ne-yig*. The *terma* texts are also hidden treasures to be revealed only by certain qualified treasure revealers known as tertons. It is believed that many *beyul* are already revealed and settled, and many more are awaiting discovery. It is not known exactly how many *beyul* are located in the Himalayas but an auspicious figure of 108 is often used. Even after a *beyul* is opened only people with pure hearts are advised to enter.

The *beyul* Pemako, located in the Yunan Province of China, is probably one of the most popular *beyul* for its beauty and sanctity. The popular notion of 'Shangri La' was believed to have been inspired by Pemako. In fact one of the nearby counties in Yunan is called Shangrila county because of this link. The other *beyul* in the eastern Himalayan region include Kyimolung, Namgo Dakam and Kongpo. They are also found in northern Bhutan, Sikkim, Nepal and south-west Tibet. The valleys of Khembalung, Khumbu, Rolwaling, Rongshar and Kyirong in the Mount Everest region are also believed to be hidden lands of Padmasambhava. The *beyul* Dremoshung in west Sikkim in particular is highly revered by the people of Sikkim and neighbouring areas. It is almost certain that there are more *beyul* in the western Himalayas, in areas such as Ladahk and Kashmir, because most Buddhist communities in the Himalayan valleys tend to associate their home with *beyul*, especially to justify proper codes of conduct and behaviour.

In the modern developmental context, the Himalayan highlands are one of the toughest places to eke out a living because of their high altitude, cold climate, poor crop choices and lack of modern transportation and communication facilities. Yet in the context of *beyul*, these places are presented in a very positive way and almost in paradise-like terms. *Beyul* are peaceful and tranquil places suited for spiritual pursuits, and also endowed with abundant natural resources such as pure water, fertile soils and plenty of wildlife. As the saying goes, 'The beauty is in the eye of the beholder.'

Within a hidden valley, many smaller sacred natural sites such as sacred mountain peaks, rocks, soil, water and trees can be found. Although not every tree or rock is considered sacred, the ones associated with supernatural spirits and protector deities (*lha-sung*) are protected. Mountains are the most important group of sacred natural sites. Buddhist communities respect the mountains as residents of powerful deities (*lha-sung*). These deities were dangerous and malevolent until they were tamed by Padmasmbhava to be protectors of people and their faith (*chhokyong*). A mountain deity can be male (*pho lha*) or female (*mo lha*). Sacred mountains can also be classed as *lha ri* or *ne ri* depending on their spiritual values. *Lha ri* are residences of respected spirits (*lha-sung*) that can be of help only during this lifetime by providing protection and bringing prosperity. They also have the power to punish people when offended. Therefore, people carry out rituals and make offerings to appease these deities.

The *ne ri* on the other hand are holy mountains sought after for pilgrimage and performing circumambulation, because they are sacred sites blessed or meditated by enlightened Bodhisattvas such as Milarepa and Padmasambhava. These sites have powers to enhance the chances of attaining a better life after death. Mount Kailas and the Tsibri range of Tibet are perfect examples of *ne ri*.

Mount Everest for example falls under the category of *lha ri*, or *lha mo* ri to be more specific, because it is inhabited by a female goddess, Jomo Miyo Langsangma, one of the five long-lived sister goddesses (*Tsering-che-nga*) known to reside in the Himalayan mountains along the Nepal and Tibet border. Miyo Langsangma has the power to bestow food and nourishment, and Tashi Tseringma, the goddess of longevity, is resident on

Mount Gauri-Shankar. The residences of the other three goddesses – Tekar Dosangma (the goddess of good fortune), Chopen Dinsangma (the goddess of wealth) and Thingi-Shalsangma (the goddess of telepathic power) – have not yet been revealed.

Similarly, most mountain villages will have a protector deity known as *Yul-lha*, resident on one of the nearby mountains. For example, the *Khumbi Yul-lha*, the protector of the Khumbu villages, is believed to reside on a 6,710 m high rocky mountain located behind the Khumjung-Khunde villages. Every year village households perform *lhapsang* rituals individually or communally to appease mountain deities and spirits including their *Yul lha*. In Khumbu, the *Yul-lha* is considered more powerful than the goddess Jomolangma of Mount Everest. This indicates that heights may not be an important determining factor for sacredness.

It appears that the colour, shape and position of a mountain in relation to settlements are important. The spiritual values of Mount Kangchenjunga to the people of the *beyul* Dermeshung (Sikkim) derive from its dominating position at the head of the valley and the existence of five peaks representing five treasure houses of gold, silver, grain and holy texts. Because the protector deity of Dermeshong resides on Kangchenjunga, the Sikkimese rulers used to request climbers not to climb the mountain. The 1955 British expedition on Kangchenjunga led by Charles Evans reached the summit for the first time but stopped a few metres short of the summit out of respect for the local belief. Wildlife such as blue sheep and Himalayan *tahr* living on sacred mountains are not hunted and harmed by the villagers below.

Some larger and older lakes such as Mapham Yumcho, Namcho and Yamdrok of Tibet are also considered highly sacred. The younger Himalayan lakes of recent glacial origin are less known for their sacred values, although lake environments are generally respected for their unknown spirits. Gokyo lake of Khumbu is considered somewhat sacred because it is thought to be a source of fertility.

Springs are commonly considered as dwellings of *lu* (aquatic deities). These water spirits are highly sensitive to pollution. Polluting activities such as burning of garbage and especially meat products are known to be offensive. When a *lu* is offended it can cause sickness to humans or leave a site, which can lead to the drying-up of springs.

Boulders, crags, and caves can be sacred residences of local *sadaks* (lords of the soil), *lu* (water spirits) and other malevolent spirits such as *nyen*. Caves are sacred because of their connection to religious figures such as Padmasambhava. Red-coloured crags are feared as residences of *chen* (spirits that are possessed). Boulders with unusual natural patterns such as footprints are commonly interpreted to be sacred and holy.

It is also not uncommon in the Himalayas to see groves of forest around monasteries in an otherwise treeless landscape. Juniper trees associated with household shrines are protected in the villages. Forests in general are not considered as sacred but

their rampant destruction is not supported by the communities. Some groves are protected by seeking a blessing or curse from powerful spiritual leaders. Similarly, large mammals such as snow leopards and brown bears are respected as manifestations of mountain deities and are not hunted. *Khumbi Yul lha* for example is believed to have an assortment of wild animals including the mythical yeti as its associates.

Influence on people's attitude to the environment

People generally try to avoid activities such as quarrelling, disturbing, polluting and other negative thoughts within holy sites. Living inside a *beyul* has a similar influence. The Buddhist principle of *ahimsa* (non-violence) is adhered to much more strictly inside *beyul*. In Khumbu, local residents do not hunt wildlife. They exhibit high levels of tolerance to wildlife damage to their crops and livestock. In the past, Khumbu residents even avoided slaughtering their own domestic animals for meat. Meat sellers are still barred from slaughtering animals within Khumbu. They are required to slaughter their animals outside the *beyul* boundary and carry the meat for several days to the local tourist market. David Snellgrove describes a similar experience where he mentioned that 'the only meat I was able to obtain from the Sherpas Khumbu over four months' residence in the area was a share of a dead yak which had been

killed by wolves and half a sheep's carcass brought over the Himalayas by the Tibetan traders'. He further noted that strict adherence to the non-life-taking attitude of the Sherpas cannot be found elsewhere outside monastic circles. Similarly, early British explorers visiting the *beyul* of the Khenbalung and Rongshar area faced strong opposition from the local people to their hunting for food.

Beyul residents believe that the land they live in is shared not only with their own human communities but also with a community of powerful invisible spirits. This makes them mindful of their own treatment of the land. They perform a special *salong* ritual to obtain permission from the invisible forces, whenever a wild land is to be disturbed for use. A simple recitation during salong says, '*Lha* and *lu* residing on this land and all the other unknown spirits, I beg from you this land to construct a mandala.' Although survival necessitates a certain level of resource exploitation and land use, an attempt is made to avoid unnecessary destruction and disturbance.

Sacred natural sites also appear to play a role in maintaining harmony between people. This is exemplified by the case of *beyul* Dremoshung of western Sikkim, where the local people invoke the deity of Mount Kangchendjunga every year during the Pang Lhabsol festival to commemorate the signing of the treaty of brotherhood between the Lepchas and Bhutias (two regional ethnic groups) to which the mountain deity was called upon as witness.

The Buddhist philosophy plays an important role. The wheel of existence shows six possible realms of rebirth: the realms of the gods, of titans, of men, of animals, of tormented spirits and of hell. The only way to increase one's chances of rebirth in a better realm is only through good deeds. Human life is seen as special because it alone provides the chance to do good things in one's present life, so that a better rebirth may be achieved. The possibilities of repeated rebirth in every sentient being reinforce the notion that even a wild animal, for example, may have been a relative or even someone's mother at some other state of existence, and that harming it is like harming one's own kin. These concepts promote adherence to the principles of non-violence and compassion to all sentient beings, and constantly motivate people to try to avoid bad deeds such as taking life, offensive behaviour, anger, quarrelling, jealousy and other malevolent thoughts, thus positively influencing people-to-people and people-to-nature relationships. The sustenance of such a relationship depends on the guidance of spiritual leaders. The saint Milarepa, a popular eleventh-century poet who came from Kyirong, demonstrated deep compassion for wildlife and love for the wilderness. His followers compiled poems that promote a harmonious relationship between man and nature.

For example:

Snow, rock and clay mountains are Mila's hermitages.
Snow and glacial rivers are Mila's drinking water.
Deer, gazelle and blue sheep are Mila's livestock.
Lynx, wild dog and wolf are Mila's guards.
Langur, monkey and brown bear are Mila's playmates.
Thrushes, snow cock and griffon are Mila's garden birds.

Later followers also played similar roles promoting forest and wildlife protection within *beyul*. These examples are presented to demonstrate the possibilities of fostering positive human attitudes to the environment by reinforcing the belief system in sacred natural sites, and especially the respect for *beyul*.

The ecosystem conservation potential of beyul

Beyul, although created as refuges for humans, have qualities in them that make them ideal places for ecosystem conservation. The large size, natural boundaries, relatively pristine conditions, and altitudinal and topographic variations are favourable for the conservation of biological diversity.

Beyul usually have a relatively low population density. The isolated and difficult mountain environment, with its difficult access and harsh climate, deters many people from settling in these places. The low human population allows for relatively undisturbed forests and wilderness, which support unique species of plants and animals that might not exist in areas with high human pressure and disturbances.

Beyul are large natural areas encompassing hundreds of square kilometres of mountain watersheds. Within these areas a variety of ecosystems can be found, including rivers, forests, lakes, alpine meadows and snow and ice fields, and also including human-modified cultural landscapes. The large areas of a *beyul* can accommodate wide-ranging keystone species such as snow leopard and wolf, and are more resilient than smaller areas such as groves and forest, so they can cope better with the impact of major disturbances such as fire, flood, and disease.

The boundaries of *beyul* are determined by the ridge crests of surrounding mountains. They have specified entrances and exits. The isolated mountain slopes within *beyul* function as 'islands' surrounded by seas of lowland, and act as refugia for endemic plants and animals that have disappeared from the surrounding lowlands, transformed by extensive human disturbance and unfavourable climate. Himalayan *beyul* are characterized by diverse topography and steep elevation gradients. This leads to a diversity of bio-climatic conditions supporting all kinds of plants and animals. More importantly, *beyul* have human inhabitants with strong conservation traditions. This provides opportunities to conserve the ecosystem with humans as an integral part of it. The world with its finite living resources can no longer limit itself to conserving nature in an untouched and pristine condition. The future of conservation lies in humanity's ability to live in harmony with the environment. *Beyul* may provide such a learning ground for sustainable living, with local people as the key player.

Challenges

The biggest challenge is that the power of *beyul* is waning. It is an intangible concept that is vulnerable to outside influences

such as globalization, nationalization, education, cultural assimilation, domination and tourism. The assimilation of *beyul* into modern protected areas without adequate recognition of their importance is another problem. Most *beyul* in the eastern Himalayas, for example, are now declared as national parks and nature reserves. *Beyul* Pemako of China is now Pema Nature Reserve, *beyul* Dremoshung of Sikkim is now Kangchenjunga National Park, *beyul* Khenbalung is integrated into the Makalu-Barun National Park, Khumbu within Sagarmatha National Park, Nubri within Manaslu Conservation Area, and the Yolmo area within the Langtang National Park of Nepal. Similarly, the sacred valleys of Rongshar and Kyirong are now included within the boundaries of the Qomolangma Nature Reserve of Tibet. Similar cases may be found further west, in the western Himalayan regions of Ladhak and Kashmir.

The ancient *beyul* and modern protected areas both aim to achieve biodiversity conservation and improved human livelihoods, but their implementation tools differ. Protected areas depend on powerful national legislation and global scientific justifications, whereas the *beyul* depend on voluntary and faith-based support of the simple local people and local context. Although *beyul* residents readily accept modern conservation approaches because the concept of protecting wild plants and animal is in line with their own basic belief systems, the managers, policy-makers and scientists associated with protected areas have been slow in recognizing the values of these time-honoured traditions in biodiversity conservation. Therefore, untested national law and policies are allowed to supersede the tested customary regulations.

Many *beyul* are no longer the isolated places that they use to be. Improved roads, bridges, airports and communication systems have made them more accessible to the outside world. Much of these developments lack sensitivity to the sacred nature of the land and the culture of the local people. Modern education that fails to integrate education in local languages and culture brings its own sets of influences. The concept is in danger of being discarded as anachronistic.

Recommendations

Empowering the *beyul* and other sacred natural sites can lend powerful cultural support to ecosystem conservation and management initiatives. At the same time it will lead to conservation of an important intangible cultural value in the Himalayas. The following actions are necessary to further strengthen the linkage between *beyul* and biodiversity conservation:

- Conduct an extensive survey of *beyul* throughout the Himalayas.
- Collect oral and written evidence on sacred natural sites and their influence on human attitudes to biological diversity, involving local experts and spiritual leaders.
- Document and publish the research findings in multiple languages, and disseminate them through protected area visitor centres and interpretive services.
- Educate and disseminate information to local schools and communities to rekindle the spirit and pride in *beyul*.
- Restore the diminished values of degraded *beyul* through appropriate empowerment ceremonies performed by high-level religious leaders.
- Strengthen the involvement of local people and work for greater recognition of indigenous knowledge and systems of resource management in protected areas.

References and further reading

Bernbaum, E. 1998. *Sacred Mountains of the World*. Berkeley and Los Angeles, University of California Press.

Chan, V. 1994. *Tibet Handbook: A Pilgrimage Guide*. California. Moon Publications Inc.

Ehrhard, F. 1999. *Sacred Spaces and Powerful Places in Tibetan Culture*, ed. Toni Huber. Dharamsala, India, Library of Tibetan Works and Archives.

Hay-Edie, T. 1998. *Nature, biodiversity and people of the Himalaya*. Paper presented at the Sub-Regional Meetings on Conserving Himalayan Heritage: The Role of the World Heritage Convention. Kathmandu, Nepal.

Jamyang, Wangmo. 2005. *The Laudo Lama: Stories of Reincarnation form the Mount Everest Region* Nepal, Vajra Publications.

Linvelle, R. (ed.) 1989. *Sacred Mountains and Environmental Conservation: A Practitioners Workshop*. Proceedings of a workshop held at The Mountain Institute, April 1998.

Mi-La-Res-Pa and Chang, G. C. C. 1999. *The Hundred Thousand Songs of Milarepa: The Life Story and Teachings of the Greatest Poet-Saint Ever to Appear in History of Buddhism*. Boston, Shambala Publications.

Ramakrishnan, P. S. 2001. *Sacred/Cultural Landscapes in the Indian Himalaya*. Final Report: UNESCO Thematic Expert Meeting on Asia-Pacific Sacred Mountains, Wakayam City, Japan. Paris, UNESCO.

Samuel, G. 1993. *Civilized Shamans: Buddhism in Tibetan Societies*. Kathmandu, Mandala Book Point.

Sherpa, L. N. 1999. *Human Impacts on the High-Altitude Forest Structures in the Nangpa and Hinku, Sagarmahta and Makalu-Barun National Park, Nepal*. Doctoral Thesis, University of Washington, Seattle.

Sherpa, L. N. 2001. *The sacred mountains of the Nepal Himalaya.* Paper for UNESCO Thematic Expert Meeting on Asia-Pacific Sacred Mountains, Wakayama City, Japan.

Sherpa, L. N. 2003. Sacred beyuls and biological diversity conservation in the Himalayas. *Proceedings of International Workshop on the Importance of Sacred Natural Sites for Biodiversity Conservation*, Kunming, China, pp. 93–97.

Snellgrove, D. L. 1992. *Four Lamas of Dolpo*. Kathmandu, Nepal, Himalayan Book Sellers.

Snellgrove, D. L. 1995. *Buddhist Himalaya*. Kathmandu, Nepal, Himalayan Book Sellers.

Wikramanayake, E. D, Carpenter, C., Strand, H. and McKnight, M. 2001. *Ecoregion-Based Conservation in the Eastern Himalaya*. WWF and ICIMOD Report.

Zangbu, N. T. and Klatzel, F. 2000. *Stories and Customs of the Sherpas*. Kathmandu, Nepal, Mera Publications.

Planning of sacred natural sites in the context of protected areas: an adaptation of a methodology for biodiversity and lessons from its application in the highlands of Western Guatemala

Estuardo Secaira and María Elena Molina, The Nature Conservancy, Guatemala

Summary

A large number of protected areas around the globe were designed for the protection of cultural heritage and biodiversity. The development of methods for the strategic planning of biodiversity conservation efforts has been a significant contribution of The Nature Conservancy (TNC).

The Guatemala Program of TNC has been involved in the large-scale planning of the Maya Biosphere Reserve, a vast expanse of 1.5 million ha of tropical forests, wetlands and hundreds of archaeological sites, such as Tikal, Mirador, Piedras Negras and Yaxhá. TNC was later invited by the Ministry of Culture to help with the management plan of Tikal, one of the largest Maya cities and a World Heritage Site.

For this planning effort we adapted TNC's Conservation Area Planning methodology, in order to include tangible cultural targets, which were categorized as cultural regions, areas, zones, sites, structures and removable objects. After this successful adaptation, we developed management plans for two municipal parks in the highlands of Western Guatemala. In both cases, sacred natural sites were selected as conservation targets by the indigenous inhabitants. A series of workshops with anthropologists were conducted in order to receive feedback for the inclusion of intangible cultural targets, which were categorized as cultural and spiritual values, traditional knowledge and use, social institutions, spirituality (which includes cosmology, ceremonial practices and sacred sites), collective memory, and cultural traditions and habits.

The planning methodology also includes a viability analysis of natural conservation targets, an integrity analysis of tangible cultural targets and a significance analysis of intangible cultural targets. In these analyses, key conservation factors for the long-term survival of the target are identified, as well as indicators and their ranking. Major threats and opportunities are later identified and prioritized in order to guide the identification and prioritization of strategies.

The development of the management plan consists of a series of workshops and field trips with key community stakeholders. This experience has demonstrated that the inclusion of sacred natural sites is feasible in the context of protected areas, and that the local inhabitants are very interested in the protection of such sites as an inherent component of their natural and cultural heritage.

Introduction

There is an impressive number of protected areas around the globe that were designed for the protection of cultural heritage and biodiversity. The development of methods and tools for the strategic planning of conservation efforts has been a significant contribution of The Nature Conservancy (TNC). However, those methods and tools were originally designed for the conservation of biodiversity.

The Guatemala Program of TNC has been involved in the large-scale planning of the Maya Biosphere Reserve, a series of protected areas and multiple-use zones which aim to protect 1.5 million ha of tropical forests and wetlands teeming with wildlife and hundreds of archaeological sites, some quite significant, such as the Pre-Classic cities of El Mirador and Nakbé, the Classic cities of Tikal, Uaxactún, Piedras Negras, Río Azul, Yaxhá, Nakum and Naranjo, and the Post-Classic city of Topoxté. When TNC facilitated the process for development of the 2001–2006 Maya Biosphere Reserve Master Plan, two cultural targets were included (archaeological sites and living cultures), along with a quite complex and complete analysis of biodiversity targets.

As a consequence of the timid inclusion of cultural targets, we were invited by the Ministry of Culture to help with the development of the management plan of Tikal

National Park, which protects one of the largest and more impressive Maya cities. The park was the first of only twenty-three Mixed World Heritage Sites, declared for both its cultural and natural heritage. For this significant planning effort we had the challenge of adapting the current TNC Conservation Area Planning methodology for biodiversity, in order to include tangible cultural targets.

In order to conceptualize the adaptations needed for the inclusion of tangible cultural targets, mainly archaeological sites, the methodology followed a process that consisted of an exhaustive bibliographic search of planning methodologies, the elaboration of a proposal for discussion and a series of meetings with archaeologists and conservation specialists. However, the final test of the adaptation was the planning process of the Tikal National Park Master Plan itself, where concepts where fine-tuned and effectively used.

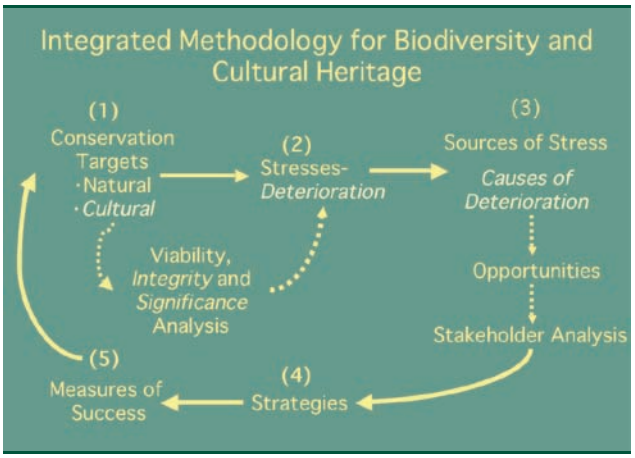
In the meantime, we were also involved in the design of master plans for municipal parks in the highlands of western Guatemala, where sacred sites and living indigenous cultures are a fundamental part of the landscape. In order to further adapt the methodology for the inclusion of intangible cultural targets, a series of meetings with anthropologists was conducted. The development in 2005 of the 2006–2010 Master Plan for the Atitlán Watershed Multiple Use Reserve, a protected area in the highlands of western Guatemala, has been our most comprehensive attempt to include both tangible and intangible cultural targets, along with biodiversity and economic activities. In the following pages, we explain the methodology and how each of its steps has been adapted for tangible and intangible cultural targets, with an emphasis on sacred sites.

Conservation area planning methodology

TNC has developed a Conservation Area Planning (CAP) Methodology as a process to strategically define and prioritize a set of effective actions in order to abate the most critical threats to biodiversity targets. The process, also known as 5Ss, consists of the following steps (TNC, 2000):

* **Systems:** here we define the biodiversity targets of our conservation efforts, which could be ecological systems, ecological communities, and species or aggregation of species.
* **Viability analysis:** this an attempt to measure the conservation status of our targets, through the definition of the key ecological attributes on which the targets depend for their long-term conservation. The ecological attributes are classified in the categories of size, condition and landscape context.
* **Stresses:** this refers to the ecological (and cultural) stresses from which selected targets are suffering s a result mainly of anthropogenic forces. Stress could be destruction, degradation or fragmentation of habitat.
* **Sources of stress:** this refers to the causes of the ecological stresses that affect the biodiversity targets.
* **Strategies:** these consist of the definition of sets of actions that will be most effective in the abatement of the most critical threats, which are defined as the sources that cause the most serious stress to our targets.
* **Success:** this refers to the selection of a set of indicators that will be the most effective in measuring the 'success' (or not) of our conservation efforts, referring to the advance of our conservation strategies and the status of our conservation targets.

This CAP methodology emphasizes the use of the most complete and up-to-date scientific information in order to produce a solid science-based plan. The process has the flexibility of being conducted either by a small number of technicians in a series of meetings, or it can involve large numbers of people and stakeholders, through workshops and community consultations. The adapted 5Ss scheme, including cultural targets, is shown in Figure 1.



Cultural targets

This refers to the cultural assets that justify the establishment of a protected area, either individually or in an association based on characteristics, attributes and/or management needs. Cultural targets have been classified as tangible and intangible.

Tangible cultural targets

The tangible heritage includes physical assets, such as archaeological and historical regions, areas, zones, sites, buildings, and objects from any time in the cultural development of a certain area. A series of categories has been proposed (Molina et al., 2003):

Fig. 1 Framework for Integrated Methodology for Biodiversity and Cultural Heritage Conservation Area Planning (CAP).

* Cultural region: a large-scale geographical region that possess common cultural characteristics associated by their connectivity, continuity and cultural-historical coherence. Example: the Mesoamerican region, from western Mexico to western Costa Rica, where several cultural groups share the same basic staple crops (corn, beans and squashes), a numerical system based on 20 and a series of very similar solar and lunar calendars.
* Cultural area: an association of zones that share more specific cultural features and are linked by historical, ethnological or stylistic aspects. For example: the Maya area, within the Mesoamerican Region, where all thirty Mayan languages are related to a common origin, and have several grammatical elements and root words in common.
* Cultural zone: a geographical unit that had a common government form that resulted in historical and political cohesion in the past. For example: the Piedras Negras and Yaxchilán archaeological zones, where several ancient Mayan sites share a common ruling dynasty that influenced architectural styles, ceramics etc.
* Unit/cultural site: the location of a significant event, an occupation or a prehistoric or historic activity, or a building or structure or association of these, which possess historical, cultural or archaeological value. This may coincide with human settlements (of different sizes), cities, towns, villages, archaeological sites, prehistoric sites, cemeteries or sanctuaries, among others. For example: Tikal, Teotihuacan and Pompeii.
* Group, sector or grouping of buildings and constructions: buildings and constructions associated by the historic period in which they were built or the function they played, such as acropolises, squares, archaeological complexes, neighbourhoods or urban centres, religious quarters, living quarters, and production sites, among others. For example: North Acropolis in Tikal or San Francisco de Lima religious complex in Perú.
* Building/construction: individual physical works that are related to domestic, civilian, military/defensive, productive, transport and recreational activities, to name a few, and in which human activities can take place (houses, temples, palaces, hotels and others). Other structures built to carry out these different functions include bridges, pavements, aqueducts, walls and tunnels.
* Mobile cultural goods: relatively small-scale components that may or may not be easily moved. As shown in previous cases, they possess a large historic, artistic, ethnological, palaeontological, archaeological and technological value and are intimately linked to their natural and social surroundings. These objects may include sculptures, stuccos, stelae, lintels, paintings, utensils, mural paintings and petroglyphs.
* Historical documents: all printed or recorded materials, where research and interventions of a given cultural region, area, zone or sites are compiled. They are very important for the knowledge or management of a specific cultural target.

Intangible cultural targets

'Intangible heritage' refers to the practices, representations and expressions, along with knowledge and skills, associated with communities and groups that are recognized as part of their cultural heritage (UNESCO, 2003). Intangible cultural targets are specific practices and representations that have been selected as components that a community or group wants to be protected. In order to better define them, a series of categories, specially associated with nature or a protected area, have been proposed:

* Intangible values: the different values that human beings associate with an area or landscape.
These values can be spiritual, recreational, related to identity or existence, artistic, aesthetic, educational, scientific (research and monitoring), associated with peace or therapeutic (Harmon and Putney, 2000).
* Local knowledge and practices related to nature: the ethno-ecological knowledge that a given cultural group or community has developed over millennia in order to manage natural processes and assure its survival.
* Social institutions: the forms of social organization that are the basis for managing and conserving the natural and cultural heritage. These institutions have been successful in conserving many landscapes around the globe, like the customary law system that rules the communal forests of Totonicapán in Guatemala and the sacred groves in Tibet.
* Spirituality: the practices of several forms of spirituality, from indigenous cosmologies to several of the organized religions, give a fundamental value to the conservation of nature. Many of the rituals and ceremonies are conducted in natural sites, like the summits of volcanoes and mountains, caves, and the shores of rivers and lagoons. Many of these sacred natural sites are located in protected areas around the globe. Stewardship of these sites is often of crucial importance to nearby local communities, and consequently, protected area managers need to recognize the importance of shared responsibility for management.
* Collective memory: the historical facts or mythical accounts that form part of the cultural heritage of communities and peoples around the globe. Those facts and accounts refer to specific sites, some of which are nowadays located within protected areas.
* Traditions: this broad category comprises all cultural practices not specified before, which have an intrinsic relationship with the landscape or area that is to be protected. It can include many cultural attributes such as language, music, dances, theatre, gastronomy, festivals and traditional games.

An example of natural, tangible and intangible cultural targets is shown for the Atitlan Watershed Multiple Use Area, in the highlands of western Guatemala (Figure 2):

Biodiversity targets:

* broadleaved forest
* mixed forest (pine and oak)
* high-altitude conifer forests
* xerophytic association
* Lake Atitlan watershed
* Madrevieja and Nahualate watershed
* horned guan

Viability Analysis	Integrity Analysis	Significance Analysis	Significance Analysis
Natural targets	*Tangible cultural targets*	*Intangible cultural targets*	*Sacred sites*
Size	Conceptual meaning	Correspondence	Correspondence
Condition	Physical condition	Transmissibility	Physical condition
Landscape context	Social and natural context	Context	Context

Cultural targets:

* Mayan archaeological sites
* colonial, republican and vernacular architecture
* Maya, colonial and republican movable objects
* sacred sites (see Figure 3)
* oral history, traditional knowledge and practices
* community values and organization
* scenic and recreational values

Analysis of conservation status

The original methodology includes a viability analysis of natural targets, which seek to define the likelihood of a biodiversity target persisting over the long run (about 100 years). In this analysis, key ecological attributes for the long-term survival of the target are identified, as well as indicators and ranking ranges for qualification.

Through the adaptation of the methodology, parallel concepts were defined for cultural heritage, as shown in Table 1.

For tangible cultural targets, the categories of analysis have been defined as follows:

* **Conceptual content:** the extent to which an element reflects the sociocultural values of the historical period from which it originates, its authenticity, age, information, messages and meanings it transmits.
* **Physical condition:** comparison between an element's original and its current state, based on:
  - how intact it is compared with its original state,
  - how fragmented (extension, volume, number of architectural elements)
  - how altered it is on a spatial level by changes, justified and non-justified attachments, stratification, etc.
  - how degraded its materials and shapes are.
* **Context:** based on the natural and social surrounding, this includes natural and/or social factors that contribute or impinge upon the conservation or degradation of selected cultural targets.

For intangible cultural targets, the categories were defined as:

* **Correspondence:** the degree to which the intangible cultural target is functional for extant communities and groups, and the degree to which it corresponds with the ideology that gave it origin. Perhaps its significance has been altered, but is still valid for current communities.
* **Transmissibility:** the existence of effective mechanisms for the transmission of knowledge and practices of the intangible cultural target.

Fig. 2 Atitlán Lake and surrounding volcanoes. Besides well-conserved forests in the volcanic chain, this area is home to ancient Maya communities who consider the whole landscape sacred, and also have specific sacred sites for their spiritual ceremonies, mainly in caves and in the top of mountains, Guatemala [left page, above]

Fig. 3 Batzib'al Juyu' sacred site. Located within the Papa' Municipal Park, in the jurisdiction of San Marcos La Laguna, this and other sacred sites, were considered conservation targets by the local Maya-Kaqchikel inhabitants during the elaboration of the management plan, Guatemala [left page, below]

Tab. 1 The methodology and analyses of conservation status [above]

Rank	Concept
Very good	The indicator is functioning within its optimal range of variation, and does not require intervention for its maintenance
Good	The indicator is functioning within its acceptable range of variation, although it may require some intervention for maintenance
Fair	range of acceptable variation, and requires intervention for maintenance
Poor	The indicator is far from its acceptable range of variation, and allowing it to remain in this condition for an extended period of time will make restoration or prevention of extirpation of the target practically impossible

Category	Indicator	Poor	Fair	Good	Very good
Physical condition	Percentage of sacred sites that conserve their natural context and are clean	Less than 30%	30–59%	60–89%	90% or more
Correspondence	Percentage of sacred sites that show evidence of recent ceremonial use	Less than 30%	30–59%	60–89%	90% or more
Transmissibility	Percentage of participants in Mayan ceremonies at the sacred sites who are less than 40 years old	Less than 10%	11–30%	31–50%	More than 50%
Context	Percentage of sacred sites that receive formal protection	Less than 25%	25–50%	51–75%	More than 75%

* **Context:** the contextual factors that contribute, or not, to the conservation of the intangible cultural target. Among the most significant factors are the legal, institutional and social framework on which the intangible cultural targets depend.

For sacred sites, practice has shown us that they are a combination of a tangible and an intangible cultural target, and consequently four categories are necessary for their analysis: correspondence, physical condition, transmissibility and context.

An indicator should be identified for each factor, and then a qualification needs to be identified according to the ranks shown in Table 2.

In Table 3, the significance analysis of the sacred sites of the Atitlan Watershed Multiple Use Reserve is shown.

Threat analysis

This refers to the identification of the most critical threats that are causing destruction or degradation of the conservation targets. In order to perform a better, more objective analysis, the threats are analysed in two components:

* **Stresses:** the ecological effects on the target. A stress to a biodiversity target can be habitat destruction or degradation. For cultural targets, specialists preferred to call them deterioration effects. The stresses or effects of deterioration are ranked by the criteria of severity and scope.
* **Sources of stress:** the human or natural causes of the stress. Sources of stress can be the advance of the agricultural frontier, overfishing, incompatible forestry or cattle-ranching practices, infrastructure development, etc. For cultural targets, the same concept has been framed as causes of deterioration. The sources of stress or causes of deterioration are ranked by the criteria of contribution and irreversibility.

The main effects of deterioration identified for sacred sites in Atitlan were landscape deterioration, restriction of access, and general loss of traditional knowledge and culture. The main causes of deterioration identified for sacred sites were deforestation, forest fires, inadequate garbage disposal, lack of recognition of indigenous rights and inadequate management of tourism.

Strategies

The most important step in the methodology is the identification of the most feasible strategies for the abatement of critical threats to biodiversity and cultural targets. The strategies are then ranked by the following criteria: benefits (in terms of attaining objectives, abating threats or improving viability), feasibility and costs.

Using this methodology, the following strategies have been developed during the planning processes conducted in the Atitlán area of Guatemala:

* Research, systematize and disseminate traditional knowledge.
* Enhance cultural sensitivity of staff from government, non-governmental organizations (NGOs) and private companies in indigenous areas.
* Enhance social appreciation of Mayan spirituality.
* Develop, in consultation with spiritual guides, a code of rules for visitors to sacred sites.

Conclusions and recommendations

The process for the development of management plans has consisted of a series of workshops with representatives of the different stakeholders in the community, including elders and religious leaders. Some aspects of the analysis are conducted through field trips, where the planning audience goes collectively to the field and conducts an *in situ* analysis of what needs to be done in order to conserve the area.

This experience has demonstrated that the inclusion of sacred natural sites is feasible in the context of protected areas, and that the local inhabitants are very interested in the protection of such sites as an inherent component of their natural and cultural heritage. Out of this experience we can make the following conclusions and suggestions:

* Sacred natural sites have started to be included systematically in the planning and management of protected areas in the highlands of Guatemala.
* We suggest that this approach should be included in a revised version of the national guidelines for the elaboration of protected area management plans.
* The sacredness of a protected area should be made explicit in the decree, management plan, interpretation and communication materials produced about it. People should know that the area is considered sacred by local communities, and should respect it.
* However, we need to strengthen the participation of spiritual guides in the planning and management of protected areas that include sacred sites. We suggest the following ways:
  - Besides including spiritual guides in general meetings, organize special, more in-depth and intimate meetings for them.
  - Even better, ask them to include the protection of sacred sites as a special theme in their own meeting and analysis mechanisms.
  - Include them in the formal bodies for the management of the protected area.

References and further reading

Harmon, D. and Putney, A. 2000. *The Non-Material Values of Protected Areas. Parks Magazine*, Vol. 10, No. 2, IUCN.

Molina, M. E., Secaira, E., Lehnhoff, A., Martin, A, Chan, R. M., Vaverde, M. J., Edwards, M. 2003. *Conservation Area Planning for Tangible Cultural Resources.* Guatemala, The Nature Conservancy.

TNC. 2000. *Esquema de las 5 S's para la Conservación de Sitios. Guatemala*, The Nature Conservancy. (In Spanish.) Online: http://www.nature.org/aboutus/howwework/cbd/science/art14309.html

UNESCO. 2003. Convention on Intangible Cultural Heritage. Paris, UNESCO.

Tab. 2 An indicator is identified for each factor, a qualification is then identified according to ranks [above]

Tab. 3 Significance analysis of Atitlan Watershed sacred sites [below]

Conservation and sustainable management of Globally Important Ingenious Agricultural Heritage Systems (GIAHS)

Parviz Koohafkan and David Boerma, FAO, Italy

Introduction

In many developing and industrialized countries, specific agricultural systems and landscapes have been created, shaped and maintained by generations of farmers and herders, based on diverse species and their interactions, and using locally adapted, distinctive and often ingenious combinations of management practices and techniques.

Building on generations of accumulated dynamic knowledge and experience, these traditional and indigenous agricultural systems reflect the evolution of humanity and its profound relationship with nature. They have resulted not only in outstanding aesthetic beauty, maintenance of globally significant agricultural biodiversity, resilient ecosystems and valuable cultural inheritance, but above all, in the sustained provision of multiple goods and services, food and livelihood security and quality of life.

Such agricultural and agro-silvo-pastoral systems can be found, in particular, in areas where the population has, for various reasons, had to establish complex and innovative land-use management practices: for example because of population pressure, geographic isolation, fragile ecosystems, political marginalization, limited natural resources and/or extreme climatic conditions. These systems reflect often rich and sometimes unique agricultural biodiversity, within and between species but also at ecosystem and landscape level. Having been founded on ancient agricultural civilizations, certain of these systems are linked to important centres of origin and diversity of domesticated plant and animal species, the conservation of which is of great global value.

Globally Important Ingenious Agricultural Heritage Systems (GIAHS) are defined as:

> Remarkable land use systems and landscapes which are rich in biological diversity evolving from the dynamic co-adaptation of a community/population with its environment and their needs and aspirations for sustainable development.
>
> *(FAO, 2002a,2002b, 2002c)*

GIAHS throughout the world testify to the inventiveness and ingenuity of people in the use and management of their environment. Their resilience and robustness has been developed and adapted to cope with environmental and socio-economic change so as to ensure food and livelihood security and alleviate risk in marginal, extreme or very specific ecologies, which could not otherwise have sustainably supported human life and agro-biodiversity at its present high level. These systems are organized and managed through highly adapted social and cultural practices and institutions. The dynamic human management strategies and processes that allow the maintenance of biodiversity and essential ecosystem services are characterized by continuous technological, social and cultural innovation, transfer between generations, and exchange with other communities and ecosystems. In addition to the biophysical resources and patterns, the wealth and breadth of accumulated knowledge and experience in the management and use of resources is a globally significant resource that needs to be preserved and allowed to evolve. This can only be done *in situ* by recognizing and supporting the relationship of GIAHS communities with their environment.

Such systems, however, often face great challenges in evolving and adapting to economic change and new and sometimes inappropriate policy environments, particularly in the contexts of land tenure, environmental change and globalization. To survive they must also adapt their productive capacity to meet the rising expectations of their members, in terms of food security and quality of life.

Diversity of typical GIAHS landscapes

* Oasis systems in the Mediterranean region and north Africa, with outstanding irrigation and water management systems (*fogarra*), which include several layers of vegetation composed of date palms, fruit trees, crops and medicinal plants, plus animals.
* Outstanding rice-based systems. This type includes remarkable rice terrace systems with integrated forest use, such as combined agro-forestry vanilla systems in Pays Betsileo, Betafo and Mananara in Madagascar, and diverse rice–fish systems and other integrated forest, land and water uses in East Asia and the Himalayas.
* Maize and root crop-based agro-ecosystems developed by Aztecs (Chinampas in Mexico) and Incas in the Andes (Waru-Waru) around Lake Titicaca in Peru and Bolivia and on Chiloé Island in Chile.
* Taro-based systems with unique and endemic genetic resources in Papua New Guinea, Vanuatu, the Solomon Islands and other Pacific small island developing countries.
* Mobile pastoral systems based on adaptive use of pasture, water, salt and forest resources through mobility and herd composition in harsh non-equilibrium environments with high animal genetic diversity and outstanding cultural landscapes. These include yak-based pastoral management in Ladakh, the high Tibetan plateau, India and parts of Mongolia; cattle and mixed animal-based pastoral systems, such as that of the Maasai in East Africa; reindeer-based management of tundra and temperate forest areas in Siberia such as Saami and Nenets; and the Korankadu dryland silvipasture system in Tamil Nadu, India.
* Ingenious irrigation and soil and water management systems in drylands with a high diversity of adapted species (crops and animals) for such environments as ancient underground water distribution systems (*Qanat*) allowing specialized and diverse cropping systems in Iran, Afghanistan and other central Asian countries, with associated home gardens and endemic blind fish species living in underground waterways; integrated oases in the deserts of North Africa and Sahara.
* Traditional valley bottom and wetland management, for example in Lake Chad, Niger River Bamileke (Cameroon), Dogon (Mali) and Diola (Senegal).
* Multi-layered home gardens, with wild and domesticated trees, shrubs and plants for multiple foods, medicines, ornamental and other materials, possibly with integrated agro-forestry, swidden fields, hunting-gathering or livestock, such as home garden systems in China, India, the Caribbean, the Amazon (Kayapo) and Indonesia (e.g. East Kalimantan and Butitingui).
* Hunting-gathering systems such as harvesting of wild rice in Chad, and honey-gathering by forest-dwelling peoples in Central and East Africa.

Heritage for the future

GIAHS represent the continuation of the historic tradition of an evolving civilization over the centuries of cultures, settlements, landscapes and habitats, most of which have been obliterated in the wake of industrial and agricultural revolutions and the advances of science, technology, commerce and communications in the nineteenth and twentieth centuries. The few that still survive as flag-bearers of the earlier tradition are worth safeguarding as a part of the protection of the world cultural and natural heritage. The national and international community has recognized in recent decades the need to protect the 'World Heritage', both tangible and intangible. The GIAHS landscapes appear to satisfy the objectives of the 1972 UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage, and the associated operational guidelines for the implementation of the Convention adopted in 1992 (Rössler, 2000). Paragraph 18 of the Operational Guidelines states that 'States Parties should as far as possible endeavor to include in their submissions properties which derive their outstanding universal value from a particularly significant combination of cultural and natural features.' The agricultural heritage systems, compared with the other World Heritage Sites, are not static or frozen in time or space. They represent a living, dynamic, socio-economic, cultural and institutional mosaic of how humanity has adapted over the centuries to the demands of dramatic advances in human civilization, while preserving and conserving to this day a rich heritage of livelihood patterns and landscapes. It is now widely recognized that an understanding of the interface of cultural and biological diversity and of associated traditional beliefs and land management systems is essential to dealing with the issues of sustainable development and environmental conservation. GIAHS landscapes also represent distinct cases of cultural diversity, and sites of considerable aesthetic interest.

The GIAHS agricultural heritage landscapes represent not only important landmarks of historical value, but also living and evolving agricultural communities, institutions and ecological and cultural heritage, which should be designated as a distinct category within the criteria of the UNESCO Convention's mixed cultural and natural properties:

> As a continuing landscape, which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress. At the same time it exhibits significant material evidence of its evolution over time.
>
> *(Rössler, 2000)*

GIAHS as stewards of ecosystems

A remarkable attribute of agricultural heritage systems is the concept of stewardship as the driving approach to the use of natural assets and services by local communities. The

people depending on such landscapes display deeply held historical, cultural, ethical and religious attachment to their habitats. Many indigenous communities attribute spiritual values to the ecosystem, as evidenced by community-based rituals and forms of worship. The underlying philosophy of these communities is akin to the spirit that modern naturalists all over the world ascribe to nature and its bounty. The spirit of GIAHS in a contemporary setting, is captured beautifully in the following lines of late Aldo Leopold, a pioneer environmentalist in the United States:

> We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect. There is no other way for land to survive the impact of mechanized man, nor for us to reap from it the aesthetic harvest it is capable, under science, of contributing to culture.
>
> *(Leopold, 1948)*

In traditional communities, such as GIAHS, land is seen as a finite and infinite milieu, which commands a lot of respect and attention not only as the provider of food and water, but also as the beginning and end of life. Land and land use are part of a cosmogony: a special reverence for the creator and the creation, which is the basis of the caring relationship such communities have with the environment. There is considerable diversity in GIAHS, but they share a common attribute of functioning broadly in tune with the diversity of ecology, climate, geography and natural resource endowments in the form of crop land, pastures, forests, fisheries and irrigation water. The systems operate as conservation-friendly agricultural landscapes or habitats. GIAHS are based on making use of and optimizing beneficial ecosystem functions within the agro-ecosystem and with surrounding ecosystems, including wild habitats.

For instance, some pastoral systems in East Africa are noteworthy for their contribution to habitat maintenance for large wild herbivores and their predators. Their preservation is important in a world confronted with a growing phenomenon of land and water degradation and pollution. As the Millennium Ecosystem Assessment (MEA) Framework for Assessment points out, the ecosystem

Examples of traditional rice-based systems exist across the world, particularly in Asia but also in Africa, Latin America and on small islands

Fig. 1 Japan [above left], Fig. 2 Philippines [above right]

Fig. 3 Indonesia [below left], Fig. 4 Madagascar [below right]

services are subjected to severe degradation because of the excessive demand for them caused by economic growth, demographic changes and individual choices. It is estimated that some 40 per cent of agricultural land has been strongly or very strongly degraded in the past fifty years by erosion, salinization, compaction, nutrient depletion, biological degradation or pollution (MEA, 2003, p. 30, sourced from WRI, 2000). It is the world's poor who suffer as a consequence, since they lack financial and institutional buffers against ecosystem deterioration and the imbalances that result in famine, drought, floods, food insecurity and malnutrition. The world's fishery resources too are now declining as a result of overfishing. The degradation of coastal fisheries resources, for instance, results in protein deficiency, since fishers, like poor farmers and herders, lack access to alternative sources of income. The cumulative loss of biodiversity below acceptable thresholds can also lead at localized levels to a loss of resilience of an ecosystem.

While ecosystem degradation, in its multiple dimensions, poses major *global* challenges, practical, on-the-ground solutions by and large must be found at the *local* level. The term sometimes used to describe this is 'glocal', referring to the state of the environment as a global problem with local solutions. In this context, a comprehensive understanding of how GIAHS have successfully adapted to changing environment through pro-conservation and pro-biodiversity practices may well hold the key to promoting viable local solutions needed to reverse the advance of ecosystem degradation.

From this perspective, understanding and safeguarding GIAHS is important to advancing the goal of sustainable development. Such GIAHS communities typically conform to the definition of functional units as set out in the conceptual framework for the MEA. An ecosystem is defined in the conceptual framework for the MEA as 'a dynamic complex of plant, animal, and micro-organism communities and the nonliving environment interacting as a functional unit. Humans are an integral part of ecosystems. Ecosystems provide a variety of benefits to people, including provisioning, regulating, cultural, and supporting services' (MEA, 2003, p. 8).

GIAHS communities, traditional agriculture and poverty

Only 25 million of the world's farmers (2 per cent) possess a tractor, and about 250 million farmers (20 per cent) depend on animal traction. One billion farmers work without a tractor or animal traction, and 0.5 billion farmers grow crops without pesticides and fertilizers. Thus, most of the investments of the twentieth century in agricultural development have reached only a fraction of the agricultural producers, and very little has affected the rural poor. While more than 2 billion people live in poverty and 800 million people are food insecure, a 25 per cent rise in food production is needed to feed additional people in the coming years. Can mainstream high-input agriculture provide the necessary food and poverty alleviation for the growing global population? The answer is likely to be yes, but not alone. A large part of the sustainable agricultural production and rural population will continue to rely on traditional agriculture, a sector that has largely been neglected in international development efforts in spite of its contribution to sustainable livelihoods, as well as to biodiversity, indigenous knowledge and landscape conservation.

A GIAHS is often the main source of income, livelihood and food security for the community tending and using its natural resource endowments. The GIAHS households, as producers and users of its goods and services, therefore function as economic agents, but often with an unique value system. Agriculture for GIAHS communities is a way of life as much as it is a means of economic activity. From their perspective, they act rationally in making their production and consumption decisions. These decisions view productivity optimization not in terms of short-term profit and maximization, but in the longer time horizon of conserving the natural resource base as the mainstay of their survival as a community. Thus, economic decision-making in GIAHS intuitively factors in the sustainability dimension to production decisions and choice of technology and inputs. Such an approach is compatible with the national and global policy objective of aiming for a balanced development process which seeks to reconcile economic growth and social development with the need for environmental conservation.

The GIAHS approach is not static, however, nor does it doom the communities to a state of perpetual subsistence. Their poverty is largely the function of their isolation, remoteness, lack of empowerment and absence of constructive drivers of opportunity. The poverty of GIAHS communities is also a consequence of the lack of recognition of these systems at national and international levels. Many indigenous communities have encountered problems of dispossession and displacement, even under the vial of nature conservation, a serious issue which has been highlighted by many indigenous leaders during the first UN Decade for Indigenous Populations (from 1995 to 2004)[1]. Such negative pressures, if not vigorously countered, would destroy a treasure trove of valuable agricultural heritage which has so far managed to survive, but will not do so for much longer without a global framework to protect, nurture and sustain such systems of abiding universal value.

Threats and driving forces

Industrial agriculture and the focus on increasing agricultural production through price subsidies, intensive farming, specialization, rapid technological change,

internationally marketed commodities and the associated neglect of externalities, have led to a generalized neglect of integrated agricultural systems which had often adapted to extreme ecologies. The lack of promotion of diversified and environmentally friendly farming and integrated management practices, and the neglect of research and development and rural services for indigenous and ingenious systems, threaten the foundation of agricultural 'culture' and associated biodiversity. Moreover, urbanization and the rapidity and extent of today's technological and economic changes threaten many of these agricultural heritage systems, including the biodiversity on which they and their societies are based.

These threats include the erosion of rural cultures and value systems, the adoption of unsustainable practices, over-exploitation of resources and declining productivity, as well as imports of exotic domesticated species, leading to severe genetic erosion and loss of local knowledge systems. This poses the risk of the loss of unique and globally significant agricultural biodiversity and associated knowledge, land degradation, poverty and threats to the livelihoods and food security of many who have depended on unique farming systems. In some areas, there are spillover effects from marginalization and increasing poverty in productive landscapes, onto wild biodiversity (such as land degradation, illegal hunting, overharvesting of natural resources and uncontrolled bio-prospecting in wildlife, plants, minerals and soil). The social and environmental integrity and resilience of such livelihood systems, and their associated biodiversity, depends on the adaptive capacity of concerned communities, but also on the enabling environment provided by policies and development strategies.

Globalization is exacerbating the pressures on small-scale agricultural systems. The penetration of global commodity-driven markets often creates situations in which local producers in GIAHS have to compete with agricultural produce from intensive (and often subsidized) agriculture in other areas of the world. Among these pressures, policies inducing increased input use and lowering farm prices for staples and cash crops are significant ones, which often may directly transform the overall economic viability and biodiversity basis of these systems. Another important pressure is the increasing demand for quality and quality control, which also has consequences for biodiversity. The convergence of such pressures is accelerating the adoption of high-yielding varieties (HYV) and exotic breeds, which results in the loss of agricultural biodiversity, and biodiversity-based and risk-adverse management systems.

The driving forces of the adoption of unsustainable practices, over-exploitation of resources, genetic erosion, loss of local knowledge, and associated risks of impoverishment, non-viable livelihood systems and socio-economic instability, vary from one system to another. They essentially include population pressure and poverty, inappropriate policies and legal environment, especially insecure land tenure and external market forces, and lack of capacity to adapt land use–livelihood systems to the rapidly changing environment while preserving the cultural and natural heritage. The root causes may include *inter alia*:

* Market incentives and economic policy environments that focus exclusively on short-term economic goals rather than long-term socio-economic and environmental goods and services, and sustainable agricultural and rural development.
* Reduced community involvement/empowerment in landscape/resource management decision-making processes.
* Inadequate attention to local knowledge and experience, and inadequate valuation of GIAHS and their associated biodiversity by research and development services, and policy and strategic frameworks.
* Inadequate support for the conservation and sustainable use of significant agricultural biodiversity (within and between species and at ecosystem level).
* Lack of marketing expertise and incentives to ensure that adequate value is placed on local cultivars and races and local produce, benefit-sharing mechanisms and so forth.
* Delegitimization of local, customary institutions for the management of natural resources, particularly the normative frameworks for access, use and benefit-sharing of natural resources. Such trends occur in the context of land reform, individuation of common property systems, and policies that promote national cultural homogeneity.

Mobilizing worldwide recognition and support

Work is ongoing worldwide for promoting sustainable agricultural and rural development, and through a few specific projects, promoting the *in situ* conservation of genetic resources by working with local and indigenous communities and their specific resource management systems. Existing projects and programmes include support for shade coffee, fishing practices that allow restocking, reducing off-farm pollution, protecting ingenious technologies for on-farm soil conservation, and conserving wild relatives of cultivars and races. However, only ad hoc support has been directed to sustaining such ingenious agricultural systems, as there is inadequate recognition of, or attention to, their global importance and the important knowledge and agricultural biodiversity they maintain. Such support is often considered as a fringe activity by governments, and little is done to mainstream its principles, lessons learnt, and successes despite a project's best efforts.

This situation and increasing pressures, including in some cases opposition to tradition, are resulting in serious gaps in

transmission of this important global heritage, constraining farmer/herder innovation, and potentially blocking the *in situ* evolution of domesticated species. Some ingenious agricultural systems have already been lost, and there is a serious risk that many more of these systems and the heritage they represent will soon disappear. Without modest but critical global attention and interventions that promote the maintenance of these alternative systems and maintain their viability, it is likely that losses will accelerate.

The World Summit on Sustainable Development (WSSD) plan of action calls for a balanced approach to ensure the economic, social and environmental pillars of sustainable development, and specifically requires the promotion of integrated and diversified farming systems.

Scientific evidence showing that GIAHS have been and can be viable and sustainable alternatives to systems that rely on monocropping, exotic breeds and high external inputs is increasing. Valuation techniques have shown the comprehensive advantages of such systems in food production and risk alleviation in the medium and long term. This argument has recently been indirectly strengthened through agricultural crises in the North (such as excessive hormone and fertilizer use in North America, bovine spongiform encephalopathy (BSE or mad cow disease) in Europe, and the impacts of cyclones, floods and droughts on vulnerable island states and risk-prone areas in each continent), and is reflected in recent guidance from the Secretariat of the Convention on Biological Diversity (CBD).

In the absence of a significant international effort, the contribution of ingenious agricultural systems to the production and maintenance of traditional agriculture and agricultural biodiversity will not be broadly recognized, supported or disseminated. Development policies will continue to favour monocropping and other practices that threaten the preservation of biodiversity of importance to agriculture, and policy and legal environments will therefore continue to be unsupportive of agricultural biodiversity conservation. *In situ* dynamic conservation of selected viable ingenious systems on a demonstration basis, and the diagnosis, documentation and dissemination of knowledge and best practices, as proposed here, is not perceived as being of high national importance in many countries where such systems exist, because of competing development priorities. Although there is increasing ad hoc recognition of the value of GIAHS, through for example scientific media, the CBD and UNCCD, this is not mainstreamed into national strategies or widespread acceptance and coordinated support on a worldwide basis.

Apart from a few national initiatives, including several Global Environment Facility (GEF) projects, there is no global programme that is centred on recognizing and supporting the important connectivity between coexisting cultural and biological diversity in agricultural heritage systems. Since the various kinds of diversity jointly provide a survival resource for the global population and environment, these can only be safeguarded on the appropriate global scale. Therefore, there is an urgent need to safeguard these interlinked diversities in an integrated manner through a global initiative.

The GIAHS initiative

The GIAHS is a relatively recent initiative of the international community, nested in the global endeavours to achieve sustainable development and attain the Millennium Development Goals (MDGs), with the specific goal to identify and safeguard globally important indigenous agricultural heritage systems and their associated landscapes, agricultural biodiversity and knowledge systems through mobilizing global and national recognition and support for such systems. The overall objective is to support such systems to realize their considerable actual and latent potential for enhancing global, national and local benefits (in terms of increased incomes, reduced poverty, and assured food security and nutrition), derived through dynamic conservation, sustainable ecosystem management and enhanced productivity of such agricultural heritage systems. Currently the secretariat of the initiative is located in the Food and Agriculture Organization of the United Nations (FAO) and supporting partners include UNESCO, the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), the United Nations Development Programme (UNDP), GEF, the International Plant Genetics Resources Institute (IPGRI), Roman Forum, the International Geographical Union (IGU), and governments and civil society organizations.

Objectives

The overall programme goal is to establish the basis for international recognition, dynamic conservation and sustainable management of GIAHS and their associated biodiversity and knowledge systems throughout the world. A new category of World Heritage Sites is expected to be created with specific activity plans in between five and ten pilot sites or systems, as well as activities to leverage global, regional and national policies and institutional support.

Objective 1

Enhanced global understanding and recognition of GIAHS, by informing, raising awareness and mobilizing recognition of the global significance of GIAHS by multiple national and international stakeholders and public, and leveraging sustained institutional, financial and global policy incentives and support for their safeguard and continued evolution.

Objective 2

Demonstration of dynamic conservation in selected globally important priority systems, through the development and

testing of strategies and participatory methods for their safeguard and sustainable management, the creation of economic opportunities and incentives, and building the capacity of farming communities and populations and local and national institutions, to promote the preservation of GIAHS and sustain and enhance the global benefits they produce, on the basis of improved understanding, assessment and monitoring of GIAHS.

Objective 3

Promotion of conducive legal and policy environments and incentive structures. Enhanced awareness and capacity of national and local policy-makers of the specific and differential policy and legal needs for the sustainable management and viability of GIAHS, leading to innovative policy and legal tools, mechanisms for their safeguard and incentive structures for their enhanced sustainability and viability.

The GIAHS programme is currently in a preparatory (GEF PDF-B) phase, being executed by FAO, which is expected to lead to a full project to be funded by GEF and cofinanced by other sources. The programme has potential to spin off into a much larger international endeavour over the longer term, supported by an emerging strategic partnership of multilateral and bilateral donors, national governments, civil society and CBOs. The agricultural heritage systems are unique in as much as they represent a fascinating story of humanity's ability and ingenuity to adjust and adapt to the vagaries of a changing physical and material environment from generation to generation and leave indelible imprints of an abiding commitment to conservation and respect for the natural patrimony. With greater international and national understanding and awareness of such systems and their global dimension, it is expected that the GIAHS programme will evolve into a much wider effort to protect, preserve and develop these important living World Heritage systems, aimed at ensuring that GIAHS become part of the global sustainable development agenda.

GIAHS contribution to international objectives, instruments and commitments

The project is timely in view of the current national and international efforts for the conservation and sustainable use of biodiversity and combating land degradation and desertification, recognition of indigenous peoples and increased attention to natural and cultural heritage. Notably, GIAHS contribute directly to:

* the implementation of the Millennium Development Goals 1 and 7
* the CBD in regard to agricultural biodiversity, sustainable use of biological diversity, and the knowledge, innovations and practices of local and indigenous communities (Article 8j)
* the World Heritage Convention (WHC), in line with its designation of outstanding sites and protected areas and UNESCO's Man and Biosphere (MAB) programme
* the Global Plan of Action for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture (PGRFA) (FAO, 1996) and the International Treaty on PGRFA (FAO, November 2001)
* the ongoing assessment coordinated by FAO of the State of the World's Animal Genetic Resources
* the implementation of Agenda 21 and the Conventions on Desertification and Climate Change (UNCCD and UNFCCC).

The programme contributes to national efforts to implement the CBD, and international priorities, in particular regarding the CBD agricultural biodiversity work programme, sustainable use of biological diversity, and the knowledge, innovations and practices of local and indigenous communities. It addresses the integration of agricultural biodiversity conservation and its sustainable use objectives in land use and natural resource management plans, and the identification and conservation of the components of biological diversity important for sustainable use of agro-ecosystems.

In each country it will play a key role in strengthening collaboration between line institutions in the environmental and agricultural sectors, including national CBD mechanisms and integrated approaches, through contributing to:

* national actions to implement national biodiversity strategies and action plans (NBSAPs), the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) and the Global Plan of Action for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture (PGRFA) and for improving information on the status, management, trends and threats to domestic animal diversity and wildlife through the ongoing assessment of the State of the World's Animal Genetic Resources
* the development and application of the ecosystem approach, and understanding of indigenous and local knowledge and land resource management practices that contribute to conserving and sustaining plant and animal genetic resources, ecological processes and agro-ecosystem services and resilient livelihood support systems
* the identification and support for reform of policy and incentive measures and opportunities that allow populations to enhance their livelihoods through the conservation and sustainable use of resources and ecosystems in productive landscapes, through the development of methodologies and mechanisms for the valuation of environmental and

other livelihood services provided by these systems and the sharing of derived benefits
* adding economic value and generating income for local communities to enable them to access national and international niche markets, labelling opportunities and sustainable tourism, and providing to the international community and the world's citizens access to exotic and biodiverse food and diets, traditional medicine, products and artefacts.

Through improving understanding of the threats that such agricultural systems face, and identifying ways to mitigate the risks of land degradation and desertification, the GIAHS programme also contributes to national and international efforts in implementing the Desertification and Climate Change Conventions (UNCCD and UNFCCC) by targeting specifically some dryland agro-ecosystems that have demonstrated outstanding resilience and adaptation to extreme climate variability, and that contain valuable indigenous knowledge. It will also contribute to the implementation of the Agenda 21 and WSSD Plan of Action, as the programme is included among international partnership initiatives and the 'type two outcomes' of WSSD.

The programme contributes to local, national, regional and global sustainable development priorities through:

* enhancing the national and local benefits derived by local populations from conservation and sustainable use of natural resources and their ingenious management systems
* enhancing food security, alleviating poverty and promoting sustainable environments in accordance with the MDGs, World Food Summit and WSSD goals
* the formulation of sustainability benchmarks and indicators for national strategies for management and development of sustainable agricultural systems and their associated biological diversity
* the development of conducive legal frameworks and policy environments for the continued existence and sustainable management of ingenious agricultural systems and their associated biological diversity and knowledge systems
* enhancing global and national recognition of the importance and value of GIAHS.

The project will work through intermediaries in the participating countries, including government bodies, non-governmental organizations (NGOs) and local community-based organizations in selected sites. It will build the capacity of development workers and technical specialists for participatory diagnosis with local farming communities, and the capacity of local communities, with the support of development bodies, to conserve and ensure the sustainable use of their biodiverse agricultural systems.

Liaison and cooperation between the participating countries will be encouraged with a view to developing strong national initiatives and mechanisms for sharing experiences and expertise among countries. The project will allow participants to build on synergy and lessons learnt across several sites, and will thereby enhance lobbying and actions to mobilize global recognition.

An underlying strategy will be to avoid or reverse the loss or degradation of essential features and attributes of these systems – especially their biodiversity – while allowing their necessary evolution and at the same time enhancing the socio-economic development of resource users and national benefits. This will require studies to improve our understanding of the evolution of these systems, using participatory approaches in the identification of ways and means to conserve such biodiverse systems while keeping them dynamic through the innovation of men and women farmers.

The project will target a selection of agricultural systems, which represent a range of GIAHS, with regard to their autochthonous agricultural biodiversity and related heritage system, innovative management practices and livelihood strategies, and eventual demonstration value and replicability, and the different biomes in which they occur. Ultimately the project will be catalytic in establishing an international inter-institutional long-term programme to safeguard the world's agricultural heritage systems for the generations to come.

Contacts

FAO and UNDP welcome expressions of country and organizational interest:
Parviz Koohafkan, Director, Rural Development Division,
Sustainable Development Department, FAO, Rome
Email: Parviz.Koohafkan@fao.org
David Boerma, Project Focal Point, Rural Development Division,
Sustainable Development Department, FAO, Rome
Email: David.Boerma@fao.org
www.fao.org/landandwater/giahs

Note

1. It is estimated that there are 300 to 500 million indigenous people in more than seventy countries around the world, representing over 5,000 languages and cultures on every continent (UNPFII, n.d.).
The UNPFII, among other tasks, provides expert advice and recommendations to ECOSOC and to programmes, funds and agencies of the United Nations. The indigenous leaders have campaigned, so far without success, for a UN declaration on the rights of indigenous people. The idea that indigenous groups have collective rights as distinct peoples has been a main sticking point on the draft declaration.

References and further reading

FAO. 1996. *Global Plan of Action for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture (PGRFA).* Rome, Food and Agriculture Organization of the UN.

FAO. 2001. *International Treaty on Plant Genetic Resources for Food and Agriculture* (PGRFA) Rome, Food and Agriculture Organization of the UN.

FAO*a*. 2002. Globally Important Ingenious Agricultural Heritage Systems (GIAHS): extent, significance, and implications for development. Background Paper by Professor Miguel Altieri, University of Berkely, California.

FAO*b*. 2002. Globally Important Ingenious Agricultural Heritage Systems (GIAHS): An Eco-Cultural Landscape Perspective, Background Paper by Professor Ramankrishnan, Rome, Food and Agriculture Organization of the UN.

FAO*c*. 2002. Le projet GIAHS (Globally Important Ingenious Agricultural Heritage Systems) en 15 questions, Background Paper by Professor Jean Bedel, Rome, Food and Agricultural Organization of the UN (In French.)

Leopold, Aldo. 1948. A Sand County Almanac. Oxford, Oxford University Press. Cited in J. S. Kidd and Renee A. Kidd (1998) *Shades of Green: The Clash of Agricultural Science and Environmental Science.* Facts on File.

MEA. 2003. *Ecosystems and Human Well-being: A Framework for Assessment*. Report of the Conceptual Framework Working Group of the Millennium Ecosystem Assessment. Washington DC. Island Press.

Rössler, Mechtild. 2000. *UNESCO World Heritage Cultural Landscapes*, background document prepared for the FAO Workshop and Steering Committee Meeting of the GIAHS project. Annex 4 of the Report of the FAO 2nd Steering Committee meeting, Paris, UNESCO World Heritage Centre.

UNPFII. n.d. *Indigenous Peoples, Indigenous Voices*. UN Permanent Forum on Indigenous Issues.

WRI. 2000. *People and Ecosystems: The Fraying Web of Life*. World Resource Institute, Washington DC, USA.

Session 3

Sacred spaces and routes

Sacred forests connected with the temple shrines of Japan

Kunio Iwatsuki, Museum of Nature and Human Activities, Japan

Summary

Small forests are beautifully maintained everywhere in Japan so as to maintain the sacred atmosphere around such religious places as temples and shrines, and we call them *Chinju-no-mori.* These forests are usually in village areas, and native biodiversity in the region concerned is partly conserved there. Immediately following the Meiji restoration, some 130 years ago, some of the *Chinju-no-mori* were damaged by people, but many of them have been preserved in their original form even today.

Japanese people worship gods of the natural world, believed to number some 8 million, and the *Chinju-no-mori* stand as an important element to sustain the sacred atmosphere in such religious areas.

With these forests, the sacred environment is maintained while at the same time they sustain the concept of a harmonious coexistence between nature and humanity. It is rather a pity to note that the idea of a sustainable lifestyle has recently changed in Japan, and the trend to a more convenient lifestyle, which only seeks economic success and materialism, has become overwhelming.

Introduction

The traditional development of the Japanese archipelago led to the formation of three distinct land zones:

- *Hitozato*, or village areas where living areas and agricultural areas have been developed after completely cutting down the forest cover, and which are carefully maintained without recovery of the forests
- *Satoyama*, or the surroundings of *Hitozato*, from where natural resources are sustainably harvested by the village people
- *Okuyama*, or mountain forests where nature has been conserved in a primitive way.

This zonation of the Japanese archipelago reflects the biosphere reserves concept, although theoretically it was developed before the concept was recognized. Japanese people, who lived mostly in the *Hitozato* areas, loved nature, and their lifestyle proved to be widely sustainable and enabled them to consume the products of nature for many years.

Japanese people worshipped the gods of the natural world, and it was generally believed that there were 8 million of them. Such worship was unconnected with any of the religious sects, and Japanese people maintained the sacred forests surrounding shrines and temples, naming them *Chinju-no-mori*, or forests to keep the atmosphere quiet and peaceful. It is rather a pity to note that this type of worship by the Japanese people to the gods is not practised nowadays. However, even at this time, when the traditional religious style of the Japanese people has largely been forgotten, the sacred forests surrounding the shrines and temples are maintained, especially in *Hitozato* areas. These forests form valuable landscapes and do a great deal to conserve the biodiversity of the Japanese archipelago.

For sustainable development, it is necessary to maintain a harmonious coexistence between nature and humanity,

and this idea was symbolized in the Expo'90 in Osaka for Flowers and Greenery. To realize the idea, it is desirable to consider the life of the sphenophylon, or life at a level higher than that of the individual.

This paper introduces the three land zones mentioned above, and concludes by discussing the sustainability of sacred sites in combining the concepts presented.

Satoyama and nature conservation

When the Japanese archipelago was developed for agriculture, with the aim of supplying resources to feed the increasing population in a sufficient and continuous manner, the primitive forests in the archipelago were partly cut down to make way for agricultural fields where the norm was the cultivation of grains and vegetables in a monoculture system. Improvements in agricultural technology have largely enabled production to keep pace with the ever-increasing population.

The development of agricultural areas began in the Stone Age, and the first serious destruction of nature in the Japanese archipelago dates to this era. However, we never say that our ancestors seriously damaged nature during that time. On the contrary, we often say that we need to sustain, or even recover, the 'nature' in *Satoyama*. Actually *Satoyama* is an anthropogenic landscape maintained after the destruction of the natural forest cover. It is perhaps better to remember that the opposite term to 'natural' is 'artificial', and our ancestors in the Stone Age had a serious artificial influence on nature in developing *Hitozato* and *Satoyama*.

I myself was born in a typical place in rural Japan, and grew up with the wonderful benefit of *Satoyama*. I love the landscape of *Satoyama* very much even though this is not really a natural state. We can understand the 'nature' of *Satoyama* even if this 'nature' is considered to be artificial. This is partly because the development of the Japanese archipelago proceeded in an ideal way for many years up until very recently when the rural lifestyle changed considerably.

The complicated topography of the Japanese archipelago made it impossible to develop the land throughout, and the agricultural sites were restricted to river basins where the water supply was sufficient. Even today, only about 20 per cent of the entire land surface of the archipelago is in agricultural use. An increasing population expects to have a greater supply of resources to support their lifestyles, and our ancestors had a wonderful advantage in being able to use the hills that neighboured many agricultural sites. In hilly areas, the secondary forests were ideally maintained, but a variety of natural resources were collected and used efficiently as resources for people.

When I was a small boy, I used to come to *Satoyama* to collect the fallen branches of trees and fallen pine cones for use as fuel, fungi and young shoots of plants for food, and many other products of forests as valuable resources for our daily rural life. Actually, *Satoyama* offered the supplementary materials needed to sustain the lives of the local people and there was no need to destroy any more of the forests. *Okuyama* was maintained in a natural state with its full range of biodiversity. Moreover, we usually consider that *Okuyama* is a site for the gods.

The land use of the Japanese archipelago was sustained for many years in this way, and the concept of recycling natural products was in the past a fundamental task of the Japanese people. Thus, we have in Japanese a typical word *Mottainai* which means that we should respect nature and should not use anything that we do not really need. As a result, a sustainable system of human life was ideally maintained even in big cities such as Edo (modern Tokyo), where a population of around a million was recorded in the Edo dynasty, two or three centuries ago.

Worship of nature

Respect of the Japanese people for nature and its products is in relation to their worship of the 'gods'. Japanese people are often said to be not particularly religious, but this only means that we are not deeply influenced by any particular religious sect. In its true meaning of the religious state of mind, I believe that the Japanese people have a deep worship of the 'gods', or of nature itself. There are 8 million gods in the spirit of the Japanese people, and this means nature itself is our god.

When our ancestors cut down the forests to develop *Hitozato*, they maintained small areas which conserved the biodiversity of the region. Even in smaller village sites, *Chinju-no-mori* were maintained surrounding the shrines and temples. These forests are related to the worship of 'gods' by local people, and to their shrines and temples, irrespective of their religious sect. In this way we maintained sites dedicated to the gods even in the developed *Hitozato* area.

Such worship of the gods by Japanese people is closely related to the concept of *Mottainai*, as natural products are usually understood as gifts from the gods. We also believe that the gods should be in the sacred forests. When the Meiji shrine was constructed some eighty years ago after the death of the Emperor Meiji, a variety of trees were brought from various localities throughout Japan and an artificial forest was grown to establish an artificial *Chinju-no-mori* there. Now, we can see the Meiji shrine beautifully surrounded by a sacred *Chinju-no-mori*, even though this shrine was established relatively recently.

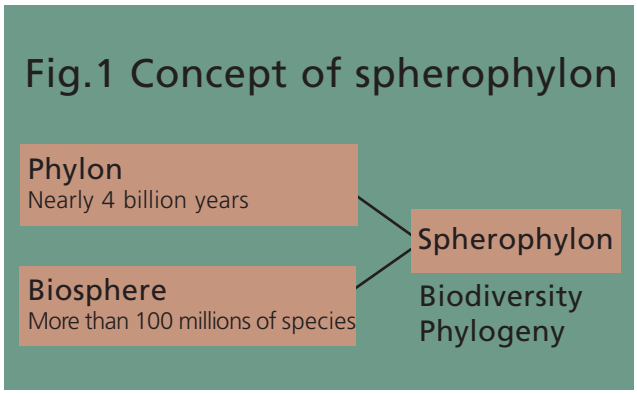
The spherophylon and sustainable development

Such a love of Japanese people for nature, which can equally been seen as the worship of 8 million gods, may

better explain why we consider biodiversity as a unit of life. Biology now shows that life can be perfectly sustained in a single cell, even though most recently evolved organisms are multicellular. We usually consider that we live as individuals, but at the same time we know that any one of our cells could (mostly theoretically, at least at the moment) be used to produce the entire body of a multicellular human being.

In the same sense, we know very well that individual organisms cannot live completely independent from other organisms. On the contrary, we know that all the organisms are interdependent on each other, although we act as if we are ignorant of this fact in our daily lives. Biology shows that all extant organisms share a common origin if we go back 3.8 billion years to when the first life appeared on earth.

I started my individuality from a single fertilized cell in my mother's womb, and now I consist of some 60 trillion cells. Biodiversity similarly originated in a single form but has now evolved to a great number of species and an even vaster number of individuals. Still, all the organisms on the earth originated in a single form, and they are interdependent on each other, in a way not dissimilar from that of the cells composing a multicellular body. I call such a life of biodiversity a 'spherophylon', a word that combines part of 'biosphere' and 'phylon', to represent something of a higher rank than individuals and/or cells.



The love of biodiversity is easily understood as a love of a portion of the spherophylon as we love every portion of our multicellular body. And as we hope to have a healthy life and know that this involves keeping every part of our body healthy, we hope that we can sustain the life of the spherophylon by caring for its various components, or various organisms on the earth.

Harmonious coexistence between nature and humanity

The main theme of the Aichi Expo is to recognize nature's wisdom. That of the Osaka Expo of Flowers and Greenery in 1990 was to promote a harmonious coexistence between nature and humanity. Humanity is a species of biodiversity, or organisms in nature. Without a harmonious coexistence with the remainder of biodiversity, the life of human beings cannot be sustained, and it is natural that we should live according to such a concept.

To repeat what was said at the beginning of this paper, it is a pity that the traditional idea of the Japanese nurturing the natural world under the guise of worship of 8 million gods has largely not been maintained in recent times. Observing the *Chinju-no-mori* established around the Meiji shrine, we should remember the sustainable lifestyle that was lived in Japan until the Edo dynasty.

Summarizing the brief discussion here, I conclude this paper by suggesting that we would do better to follow the activities of our ancestors, who sustained the Japanese archipelago under a concept of harmonious coexistence between nature and humanity. This is more understandable if we consider that humanity as a whole, and all human individuals, including you and me, form an element of the spherophylon, or a life of biodiversity. This is shown symbolically in the *Chinju-no-mori*, the sacred forests surrounding temples and shrines in developed areas in Japan.

References and further reading

Iwatsuki, K. 1999. *'Seimeikei', or the Life of the Spherophylon: A New Concept of Biodiversity*. Tokyo, Iwanami-shoten. (In Japanese.)

Iwatsuki, K. 2000. Plant systematics in the 21st century under social impact – a case study of systematic botany in Japan.

B. Nordenstam, G. El-Ghazaly, M. Kassas and T. C. Laurent (Eds.). 2000. *Plant Systematics for the 21st Century*. Wenner-Gren International Series No. 77. London, Portland Press, pp. 297–304.

Fig. 1 Concept of spherophylon

Pre-feasibility study for a network of protected areas associated with the Gran Ruta Inca: executive summary

Allen Putney, IUCN Task Force on Cultural and Spiritual Values, USA

Introduction

The road system constructed during the Inca Empire in the Andes of South America is one of the marvels of antiquity. The main north–south thoroughfare, the Great Inca Highland Road, or *Gran Ruta Inca* (GRI) in Spanish and Capac Ñan in Quechua, is approximately 7,000 km (4,300 miles) long, as the condor flies, from the extreme south of Colombia to central Chile and western Argentina, passing through the Andean Highlands of Ecuador, Peru, Bolivia, Argentina and Chile (Figure 1). The attraction of this splendid route lies in both the outward and inward journeys it facilitates. For local communities and visitors alike, the GRI is a dialogue with the sacred in a landscape that is alive with beauty, connection and meaning.

This archaeological treasure provides a unique opportunity for promoting the sustainable development of Andean peoples, and for nurturing a transcendental experience for visitors. By conserving and managing this rich resource, the GRI could be developed for ecotourism, the revaluation and remembering of Andean culture and research, and the creation of intercultural spaces to explore values and cosmologies of the past and present.

In 1999, a field study of the Gran Ruta was conducted from Quito, Ecuador, passing through Peru and on to La Paz, Bolivia (Espinosa, 2002). It discovered that sections of the GRI retain their original characteristics, others have deteriorated but are still identifiable, and other sections have been lost. This information provides an excellent starting point for determining priorities for the conservation, management and utilization of this treasure of the Andes.

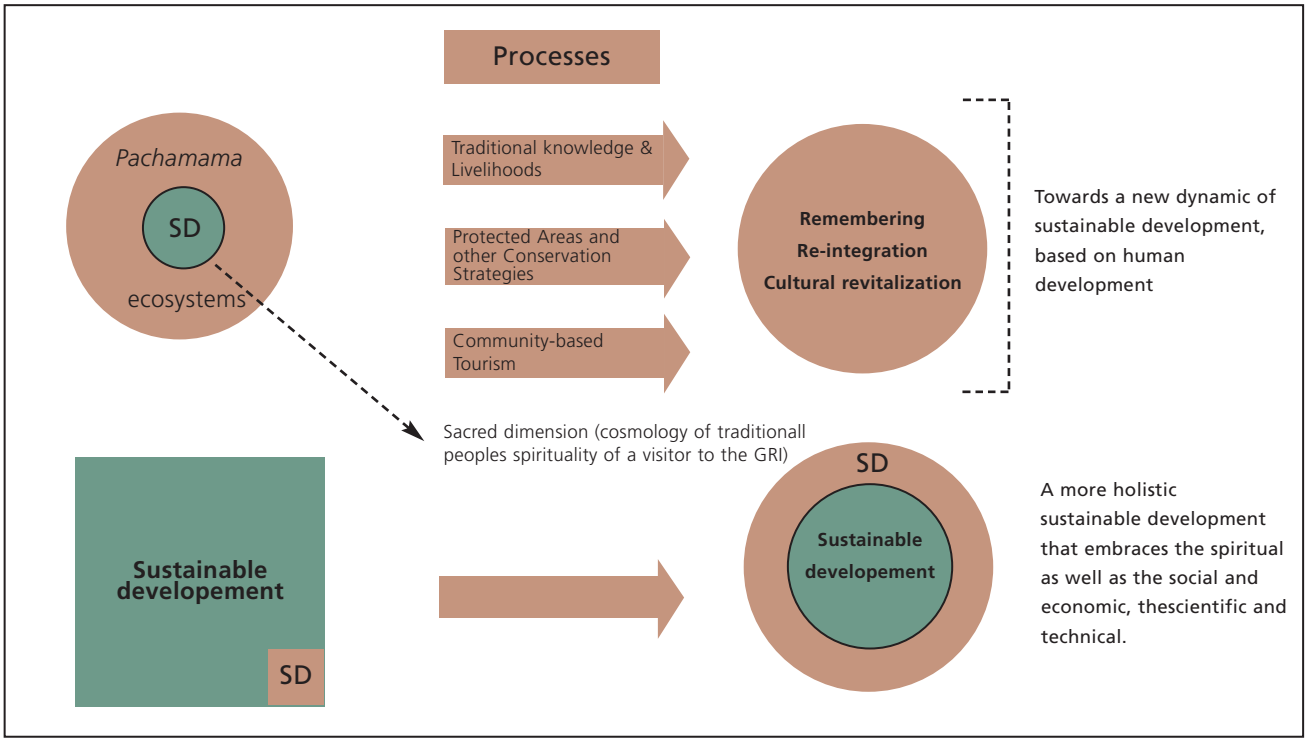
Fig. 1 The Gran Inca Ruta: The Great Inca Highland Road

The study

Inspired by the results of the field study, the World Conservation Union (IUCN) carried out a *Pre-Feasibility Study for the Establishment of a Network of Protected Areas Associated with the GRI* (IUCN/WCPA, 2003). This study sought to identify potentials and priorities, and to determine how this unique resource could be used for the sustainable development of communities along the route, while protecting the natural and cultural heritage. It

presents a vision for the establishment of a network of protected areas, using the term 'protected areas' in the broadest sense. This includes all categories of protected areas (IUCN Categories I to VI) and all levels of governance (national, provincial, municipal, community and private).

The conceptual framework for the study is based on an interpretation of Andean cosmology that understands nature (*la Pachamama in Quechua*) as both the *material* (natural resources including ecosystems, of which humans are a part) and the *non-material* (the sacred). It is these two intertwined



The hypothesis is that these diverse areas, initially few in number and limited in extent, will develop methods and approaches, demonstrate potentials and generate successes that will catalyse the growth of the network until one day it will merge into one large protected area the length of the GRI.

The study was initiated by IUCN's World Commission on Protected Areas through a generous grant by the Ford Foundation, and supported by the IUCN Regional Office and National Committees in South America. Additional support was provided by Conservation International, PROFONANPE, Carlos Augusto Dammert, The Mountain Institute, the Antamina Mine, the Programa Andes Tropicales Foundation, and the Instituto para la Investigación y Conservación de la Biodiversidad (ICIB), Bolivia. Initial distribution of information among relevant institutions about the study was followed by the collection of background information on the natural and cultural resources associated with the GRI. This preliminary information, sketchy and uneven between countries, was complemented by information gathered at workshops with specialists in Quito, Lima and La Paz, and consultations in Chile and Argentina. Analysis of this information provided the basis for the selection of priority projects at the regional and national levels.

aspects of nature that provide the basic building blocks for the development of individuals and society. The GRI is a legacy of the ancients which traverses the *Pachamama*, and

Fig. 2 The conceptual framework for the protected areas associated with the GRI [left]

Fig. 3 Ceremony undertaken to seek permission to carry out the Gran Ruta Inca Initiative. Photo credit: Allen Putney

Fig. 4 Pachanta - Ausangate Peak, South of Cusco, is one of the most sacred mountains encountered along the Gran Ruta Inca. Photo Credit: Allen Putney [right]

thus is sacred. If managed in ways that combine the ancient wisdom of traditional knowledge, the modern notion of protected areas (especially the cultural landscape concept) and the current trend towards community-based tourism, this sacred route could lead to the remembering and revitalization of Andean culture. This cultural remembering will make possible a holistic form of sustainable development, based on human potential in the broadest sense, including the spiritual. A diagrammatic representation of this framework is presented in Figure 2.

The resource

Gran Ruta Inca

The GRI negotiates the Andean highlands at altitudes that vary from 1,000 to 4,500 metres (roughly 3,000 to 13,500 feet) above sea level. In many places it is monumental in size and concept, being up to 15 metres wide. Some 30,000 kilometres of feeder roads led off to the coast to the west and the jungles to the east. These roads tied the administrative, religious and productive centres into the Inca Empire, and ultimately to the centre of the Inca cosmos, the city of Cusco.

Construction characteristics varied greatly, depending on local conditions and building materials. The roads were complemented by ancillary facilities, such as warehouses, relay stations, living quarters, llama corrals and military posts. The Empire had the most efficient communication system the world had known until then. It was based on a system of swift runners, the '*chasquis*', who were spaced along the road system at relay stations so that messages could be efficiently sped along at the rate of about 250 kilometres per day. Goods were transported along these same roads on the backs of the Andean camel, the llama, which were organized into huge caravans of many hundreds of animals.

The current condition of the GRI is known from Quito and La Paz, which is about 47 per cent of the total length of the GRI. In this section roughly 25 per cent is still plainly visible, although exhibiting varying degrees of conservation. To the north of Quito and to the south of La Paz, no systematic exploration of the GRI has been carried out and knowledge is sketchy. Even the precise route of the GRI is unknown except for relatively small sections that are known to local communities, or have been studied by individual archaeological research projects.

Associated communities

The GRI passes through major cities and towns, but in these places it has been covered over or destroyed. Thus it is the villages and hamlets that relate most directly to this ancient

route. These are the rural areas of the Andean highlands occupied mainly by indigenous peoples living in extreme poverty. For these people, GRI holds out hope as one of the few resources with the potential for sustainable economic development in a globalized economy, mainly through community-based tourism. Other important values of the GRI are less apparent to the outsider. Certainly the role of the GRI in validating and connecting Andean cultures once again is one such value, though it is difficult to predict the pathways and modalities that this revival will take. Examples include the potential of the GRI to retake its role as an avenue for maintaining agrobiodiversity by encouraging contacts between villages that result in the distribution of seed varieties. Another is the role of the GRI in reconnecting the sacred geography that is at the centre of Andean tradition.

Associated cultural resources

The cultural resources associated with the GRI include both archaeological sites and living manifestations of Andean cultures, and each is found in great quantity along the GRI corridor. Certainly the best-known archaeological sites of the GRI are Tiahuanaco in Bolivia, and Cusco in Peru, the ceremonial centres that gave birth to the Inca Empire. But there are many other major sites, which are less known, and have been little studied, and literally thousands of other minor sites that have not been mapped or inventoried.

The living cultural elements are even less well known, inventoried or studied. Certainly specific elements are known locally and within regions of each country, but these data have not been assembled or cross-referenced with respect to the GRI corridor. These elements include customs and traditions such as storytelling and oral history, dress, music, dance, festivals, arts and crafts, architecture, tools and implements, games, rituals, symbols, agricultural practices, social organization, conflict resolution techniques, leadership, family organization and resource allocation.

Associated natural resources and protected areas

The natural resources associated with the GRI are those that are typical of the high Andes mountains. There are 100 ecoregions in South America, and the GRI traverses fifteen of these. Four of them are considered to be of global importance, and another six of regional importance for conservation. Perhaps the most important natural resource associated with the GRI is water. The high Andean environments absorb enormous amounts of water, which are released in steady streams over the year. The water reservoir and anti-erosion functions of these environments are of great importance as regulators of runoff.

The charismatic fauna characteristic of the high Andes GRI corridor include the vicuña, guanaco, spectacled Andean bear, condor, vizcacha and flamingos. The vegetation of the *paramo* and puna is dominated by hard grasses, cushion plants, small herbaceous plants, shrubs and dwarf trees. The GRI also passes through both wet and dry forests on the eastern flanks of the Andes, especially in northern Peru and Ecuador. In northern Chile, the western branch of the GRI passes through a large section of scrublands, and at its southern extreme, south of Santiago, it briefly passes through forests fed by winter rains.

The national protected areas that are intersected by, or are near, the GRI are shown in the attached map. The GRI corridor directly intersects nine areas (including one World Heritage site, three biosphere reserves and three Ramsar sites), but only an estimated 460 kilometres of the 8,500 kilometres of the GRI (5 per cent) passes through these areas. The GRI also passes close to, but does not intersect, eight other national protected areas.

Threats and opportunities

The major threats to the GRI corridor are the construction of roads, and the degradation of both natural and cultural resources. Fortunately these threats are balanced with opportunities that include world fascination with the Inca Empire and its legacy, community interest, ongoing studies into critical species and habitats, and ongoing projects for the sustainable development of border areas between countries and for the conservation of the *paramo* ecoregions.

The sacred dimension

Numerous researchers point to the 'sacred dimension of nature' as being a central element of the cosmology of Andean cultures. This sacred dimension has been one of the principal evolutionary threads of Incan and pre-Incan cultures, and was the foundation for these societies' relationship with their environment. This cosmology is very much alive today, though subject to varied adaptations among different groups of Andean peoples.

The GRI was a monumental and transcendental aspect of Inca culture and geopolitics. Yet it was also a magnificent accessway and guide to a sacred landscape that is itself a dialogue among the Pachamama, human society, the ancestors and the gods. It is assumed that the GRI must have had an important impact on Incan understanding of the sacred

Andean landscape, and that in reviving this monumental route, it is both feasible and desirable to 'remember' the sacred dimension, and 're-learn' the spiritual and non-material values the ancients taught, while simultaneously making use of the GRI as a fundamental resource for the sustainable development of the peoples it touches.

A strategy for reviving the GRI must include programmes not only to introduce today's society to this archaeological treasure, but also to reaffirm the sacred dimension of nature to which this monumental route provides access. Development of the GRI that respects local perspectives and traditions will inevitably lead to the recovery of ancient conservation practices, and to prominent recognition of the sacred dimension.

A vision for management

Objectives

The general objective of IUCN's Gran Ruta Inca Initiative is to: revitalize this ancient master-work as a unique resource, and opportunity, to catalyze the sustainable development of the high-Andean corridor it defines.

Specific objectives: entire GRI corridor

These include:

* Document the location and condition of the GRI and develop a geographical information system and database.
* Identify key threats and promote their control and mitigation.
* Develop overall strategies, policies, standards and criteria for conservation and management, and promote and coordinate implementation projects.

Specific objectives: priority areas

Within the overall context and constraints of the general objective, the specific objectives are as follows:

* the sustainable development of Andean communities
* the conservation, stabilization, restoration and utilization of the GRI
* the conservation of associated archaeological sites

Fig. 5 Many Incan ruins and engineering works are encountered along the Gran Ruta Inca. Photo credit: Allen Putney [left page, left]

Fig. 6 Guarda - Modern use of the Gran Ruta Inca. Photo credit: Ricardo Espinosa [left]

Fig. 7 Construction materials and techniques varied with geographic conditions, and local styles. Photo Credit: Ricardo Espinosa [right]

* the recognition of, and respect for, sacred natural sites
* the conservation and sustainable use of associated natural resources, especially biodiversity, and tourism and water resources
* the establishment of protected areas in the broadest sense (all categories, all levels of governance), and one or more biological or agro-biological corridors
* the development of community-based tourism
* the revaluation and remembering of Andean cultures and maintenance of living cultural resources
* the establishment of intercultural spaces to explore past and present values, their significance for the future, and their role in facilitating people/nature relationships.

Guidelines

Principles have been developed to guide the maintenance of the special qualities of critical areas, and the planning and management of protected areas through participatory processes. Special attention is given to the concepts of cultural landscapes, since this is perhaps the most relevant management category for the large sections of 'lived-in landscapes' that the GRI transits.

The conceptual framework for the project identifies three critical processes that drive the initiative. The first is the traditional knowledge and livelihoods, which draw on 20,000 years of human experience in the high Andean environment. The second is the protected areas network which includes seven currently established national protected areas, nine priority areas for the expansion of the national protected areas systems, and a vast potential for new locally protected areas, many of which will apply the cultural landscape concept. The third critical process is community-based tourism, for which there is a huge potential along the GRI corridor. A regional strategy is required to identify ways, means and priorities, but care is also needed to recognize local sensitivities, and honour community decisions to not permit tourism in important or fragile areas.

Finally, there is a need to develop and maintain a coherent and integrated regional approach to the GRI Initiative. This makes it necessary to clarify the institutional arrangements; develop regional strategies, priorities and standards; establish strategic alliances and local ownership; monitor project activities, distill experience and identify best practice; build capacities, especially locally; evaluate results; and redesign intervention strategies based on experience.

Priority projects

The GRI is a testimony to the full extent of the Inca Empire, and activities designed to revive and restore this great road must also cover its entire length. This implies that activities related to the GRI Initiative must be undertaken at the international, national and site levels. The critical actions to conserve and mange the GRI are summarized in the following listing of priority projects.

International level

1. *Bridging grant* (US$500,000)

* Participatory development and financing of specific projects, two years (US$500,000).

2. *Full reconnaissance and registration of the GRI* (US$800,000)

* Expeditions for Northern Ecuador, Southern Colombia, Bolivia south of La Paz, Chile and Argentina (US$500,000).
* Publication of technical reports on expeditions (US$50,000).
* Filming of expeditions and production of documentary (US$250,000).

3. *Institutional capacity for coordinating the protection and development of the GRI* (US$ 2,625,000)

* Creation and operation of a GRI Regional Council (members from six countries) for five years (US$75,000).
* Creation and operation of the Inter-Institutional Coordinating Committee for five years (US$50,000).
* Strengthening of the IUCN Regional Office in Quito for five years (US$1,500,000) to:
  - serve as Secretariat for the GRI Regional Council and the Inter-Institutional Coordinating Committee;
  - coordinate the development and implementation of regional strategies on tourism, and on public education and awareness;
  - coordinate the GRI Protected Areas Network and compile and share experiences and best practice;
  - develop and maintain a geographical information system and database;
  - provide regional support for project identification and development, and public education and awareness programmes;
  - promote and coordinate the implementation of regional, national, and local projects through other institutions;
  - promote and coordinate the establishment of technical and legal guidelines for conservation and restoration of the GRI, and of protected areas and ecotourism associated with the GRI;
  - develop guidelines and provide regional support for the identification and mitigation of immediate and potential negative impacts to the GRI.
* Establishment and management of an emergency response fund for sections of the GRI in danger (US$1,500,000).

4. *Establishment of GRI Trust Fund* ($5,360,000)

* Study of alternatives of whether to set up new fund or integrate into an existing fund or funds (US$10,000).
* Legal establishment or integration into existing fund (US$50,000).
* Board of Directors and Secretariat startup and operation until expenses are covered by capital earnings, two years (US$300,000).
* Initial fund capitalization (US$5,000,000).

* Assistance with the establishment of visitor fee systems in each of the protected areas associated with the GRI (cost covered by capital earnings of the fund).

National projects

1. Ecuador (US$1,960,000)

* Development of conservation strategies for the Achupallas–Ingapirca and Vilcabama–San Antonio de las Aradas sections of the GRI (US$160,000):
  - stakeholder consultations and capacity building;
  - study of management alternatives;
  - development of detailed proposal;
  - development promotion of proposal and legal establishment by competent authorities.
* Immediate protection and stabilization of endangered sections, and management of sustainable tourism use of the Achupallas–Ingapirca and Vilcabama–San Antonio de las Aradas GRI Corridors, one year (US$200,000).
* Implementation of the Achupallas–Ingapirca and Vilcabama–San Antonio de las Aradas conservation strategies, four years (US$1,600,000).

2. Peru (US$ 2,350,000)

* Development of a conservation strategy for the Huari–Huanucopampa and Huanucopampa–Huarautambo sections of the GRI in support of the ongoing project by The Mountain Institute (US$160,000):
  - stakeholder consultations and capacity building;
  - study of management alternatives;
  - development of detailed proposal;
  - promotion of proposal and legal establishment by competent authorities.
* Immediate protection and stabilization of endangered sections of the Huari and Huanucopampa Corridors, one year (US$200,000).
* Implementation of the Huari and Huanucopampa conservation strategies, four years (US$1,600,000).
* Promotion of the GRI as a route for reestablishing the interchange of seeds and plant varieties among communities in the Conchucos to Huarautambo corridor, thus contributing to the strengthening of traditional agriculture and its place in Andean culture, four years (US$300,000):
* interchanges among communities to share seeds and traditional knowledge

Fig. 3 IUCN members working during a visit to the Meiji Shrine (Tokyo, 2005)

* systematic recording of traditional knowledge, technologies and agricultural practices
* redistribution of findings and strengthening of ancient ties and cultural values
* mobilization of communities to protect and conserve the GRI.
* Studies of potentials and management alternatives for the Cerro Huaylillas (Huamachuco–Conchucos), Chackamarca–Lago Junin and Tarma–Jauja GRI corridors (US$90,000).

3. Bolivia (US$2,460,000)

* Development of proposal for a biological corridors and conservation strategies for the Lago Poopó and Tupiza sections of the GRI ($160,000):
  - research on key species and related habitats;
  - identification of critical sites;
  - stakeholder consultations and capacity building;
  - study of management alternatives;
  - development of detailed proposal;
  - promotion of proposal and legal establishment by competent authorities.
* Immediate protection of critical natural and cultural resources associated with the Lago Poopó and Tupiza segments of the GRI, one year (US$300,000).
* Implementation of the Lago Poopó and Tupiza Conservation Strategies, four years (US$2,000,000).

4. Chile (US$1,750,000)

* Research on the extent and condition of the GRI in the Ascotan–San Pedro de Atacama segment of the GRI and in the Llullaillaco National Park, one year (US$60,000).
* Immediate protection and stabilization of endangered sections of the GRI in the Ascotan–San Pedro de Atacama area and the Llullaillaco National Park, one year (US$100,000).
* Establishment and operation of a Committee of Stakeholders for the Conservation and Development of the GRI in the Ascotan–San Pedro de Atacama area and the Llullaillaco National Park, four years (US$80,000).
* Participatory development of a plan for the restoration of the GRI, and development of tourism, through the Stakeholders Committees for the Ascotan–San Pedro de Atacama and Llullaillaco areas (US$80,000).
* Implementation of the restoration and tourism plan for the GRI in the Ascotan–San Pedro de Atacama and Llullaillaco areas, four years (US$800,000).
* Study of alternatives for the expansion of the Flamenco National Reserve to include important sections of the GRI (US$50,000).

5. Argentina (US$2,980,000)

* Research on the extent and condition of the GRI in the Laguna de los Pozuelos National Monument and Biosphere Reserve, and San Guillermo National Park and Biosphere Reserve, one year (US$100,000).
* Immediate protection and stabilization of endangered sections of the GRI in the Laguna de los Pozuelos National Monument and Biosphere Reserve, and San Guillermo National Park and Biosphere Reserve, one year (US$200,000).
* Establishment and operation of a Committee of Stakeholders for the Conservation and Development of the GRI in the Laguna de los Pozuelos National Monument and Biosphere Reserve and San Guillermo National Park and Biosphere Reserve, four years (US$120,000).
* Participatory development of a plan for the restoration of the GRI, and development of tourism, through the Stakeholders Committee for Laguna de los Pozuelos and for San Guillermo US$160,000).
* Implementation of the restoration and tourism plan for the GRI in Laguna de los Pozuelos and San Guillermo, four years (US$2,000,000).
* Research, development and implementation of a plan for the legal shearing of a trial population of vicuña in the San Guillermo Biosphere Reserve for use by local artisans in weaving, and legal marketing of the products, four years (US$400,000).

Conclusion

The almost US$21 million worth of projects identified in this study are needed over the next five years to assure the conservation and development of the GRI, especially the priority sections, and the associated natural and cultural resources. If these projects are successful, new ones will undoubtedly be undertaken to complement those that are in progress. Over the long run, it will be the fees paid by visitors that will have to cover the costs of maintaining and managing these protected areas. This will assure the sustainability of the activities catalysed by this pre-feasibility study.

Contacts

For more information please contact any one of the following persons:
Miguel Pellerano, IUCN Regional Office for South America (Miguel.Pellerano@sur.iucn.org)
Ricardo Espinosa, IUCN Consultant (rutainca@yahoo.com)
Allen Putney, IUCN World Commission on Protected Areas (Allen.Putney@att.net)
Patricia Zurita, Conservation International (p.zurita@conservation.org)
Jorge Recharte, The Mountain Institute (jrecharte@mountain.org)
Carmen Miranda, ICIB (cmiranda@megalink.com)

References

Espinosa, Ricardo. 2002. *The Great Inca Route*. Lima, Petroperú.
WCPA/IUCN. 2003. *Pre-Feasibility Study for the Establishment of a Network of Protected Areas Associated with the GRI.* World Conservation Union/World Commission on Protected Areas.

Southern Ethiopian sacred landscapes: the past, current status and distress

Makko Dogisso Dosha, Metasebia Bekelle, Bureau of Information and Culture, Ethiopia, and Wolde Gossa Tadesse, The Christensen Fund, USA

Sacred landscapes

According to the World Wide Fund For Nature (WWF), sacred natural sites are 'specific places recognized by indigenous and traditional peoples as having spiritual and religious significance or as sites established by institutionalized religions or faiths as places for worship and remembrance'. A careful study of Ethiopia's living sacred sites indicates that the above definition requires further qualification. Southern Ethiopian sacred sites defy this definition to some extent. Observing and examining Gamo, Hor and Konso sacred sites of indigenous spiritual practice in Ethiopia, one notes that sanctity is not limited to spots in the landscape, but covers the whole landscape with which people engage in enduring,

Fig. 1 Ch'add'e Kasha in Gendo C'hencha. Note the sacred grove. Photo: Tadesse

meaningful and lively conversation. This enduring engagement with the sacred landscape shapes the lives of people, as well as the landscape and people's continued interactions with it. People are born, live and grow in close connection and interaction with the landscape, and have intimate associations with it. A child joins bigger children herding sheep and cows in sacred lofty mountain pastures or lowland rangelands until early adulthood. Agricultural labour groups grow from early adulthood to maturity caring for the land, observing clear conventions that guide the handling of the landscape (observing certain restrictions while cultivating the land, manuring the fields, planting, weeding and harvesting, every year). Throughout this process, they learn the sanctity of their landscape. They take part in religious ceremonies that initiate calendar-based activities as well as life-marking events which are linked to their sacred landscape.

Geography of the sacred

The home space is among the most sacred parts of the landscape. The area of the family bed and sacrificial sections of the house are revered. The centrepost and fireplace are particularly sacred. Outside the house, the place of sacrifice for the sun (*awa arshe* in Gamo), streams, forest groves, swamps, graveyards, assembly places marked with special trees, and open markets that have assembly places attached to them, and footpaths connecting the landscape are all sacred. Among the pastoral lowlanders the cattle kraal is sacred. The fireplace located in it is sacred. The cattle gates of the kraals of some families are sacred, and people enter through them for peace and for receiving blessings. The *Nab* or the village centre where young and old assemble is sacred. The home that is the centre of social and cultural reproduction is sacred. Footpaths are sacred. Travellers recite prayers upon return from a journey for the sanctity of the paths and for good things to arrive through them. Streams, ponds, swamps, pasturelands and forest groves are sacred, known as *mis'a*, *Kashsha*, *ch'imma*, *Zuma Kalo*, *shafa* and *Dubusah* in Gamo, *Naba* and *Sandoyte* in Hor, and *Mora* in Konso. Places where pacts are made between two or more communities are sanctified and are celebrated occasionally. Assembly places variously known as *Dubusha*, *Nab* or *Mora* in the communities mentioned in this report are sacred. Any passer-by will pause to sit at these places for a few minutes as an expression of respect because of their sanctity (it is a particular practice at Laka Dorze in Gamo Gofa, Ethiopia). Often assemblies at these venues follow prayers by a number of eligible juniors and seniors. People speak truth at these spaces and revere them.

Sanctity of space in Gamo can be seen as the sanctity of the house superimposed on the whole landscape. Besides the whole landscape being sacred, every bit of it has a spiritual patron. Often a sacred place is cared for by a hereditary spiritual guardian, who is considered its head, and who coordinates community resources to perform religious activities at that place. As the person responsible for protecting and maintaining its sacredness, the guardian creates a link between the people and the land. No one particular guardian or group has a monopoly on guardianship. Rather, guardianship of sacred landscapes is fairly well distributed among clans and families that inherit this responsibility.

One characteristic of sacred lands is that they can be reproduced to benefit those who require their spiritual powers. It is said that the Dokko of Gamo have in the distant past taken earth from the Muta sacred mountain and formed their own in Masho. To this day, they maintain good relations with the people of Chencha and the original Muta mountain. In another instance, Hor pastoralists, who consider their entire land sacred, move their settlements occasionally and form new sacred lands in the new settlement. The orientation and configuration of villages is reproduced over and over again, reinforcing the sanctity of the whole landscape.

Another important point is that sacred lands, for those who revere them, cover the whole landscape to which they are connected. A Gamo person's spiritual experience cannot be effective outside Gamo sacred land. The experience of joy, grief, honour, or the celebrating of success or calendar-based religious events, requires physical presence in the landscape. One should receive titles, engage in marriage, or mourn the dead in the land that is sacred and different from all others. For the Gamo, prayers, blessings and similar religious expressions are effective only in their native landscape because of the sanctity that is in the whole of the land. One's belonging to a community (in this case Gamo, Konso or Hor/Arbore) is based on this link to the land and its sanctity. The link begins with the connection that is established at the place of the ancestral centrepost and is nurtured through time. People are connected to all the other sacred landscapes through routes that link us all. A member of a group cannot have a legitimate marriage elsewhere or mourn its dead other than in such a landscape. Hor leaders do not make blessings outside their territory simply because other people's lands are sacred and have efficacy to them rather than to the Hor. Hor blessings become powerful even to their neighbours when performed from a Hor sacred landscape.

Sacred sites versus sacred landscapes

The individual site approach to understanding sacred landscapes is interesting, but reduces the significance of indigenous conceptions of sanctity and the land to individual sites and what they contain, such as their biological wealth, and not the complex relationship that exists between people and their landscape. This affects not only the relation between humans and their landscapes, but also interpersonal relationships as codified and practised for many millennia by tradition. The individual site approach probably explains the sacred sites of 'religions of books' very well. However, we argue

that the landscape in general is sacred, and any human engagement with the land in Gamo, Hor and Konso reflects this fact. To help understand the sanctity of the landscape, it helps to view landscape as part of, and connected to, the many threads of human existence and to other landscapes. As human relations are built and connected beyond a given landscape, relations of sacred landscapes are also built and reproduced in contiguous landscapes and across religious boundaries. Many sacred places are powerful grounds where pilgrims from across religious borders attend, and where religious differences are downplayed. Ziqwala in central Ethiopia, Ele, Birbira and Lisha in Gamo, and the homesteads of many religious leaders of the south are sacred to indigenous groups as well as to Christians, Muslims and others who attend celebrations on them.

What sacred places contain in terms of biodiversity should not overshadow their larger significance in maintaining relations between people and the landscape, and their centrality in the operation and reproduction of culture and society. Intricate webs of relations exist between people and the landscape, and this is key for biological and cultural diversity. Attention to sacred landscapes should underline that there is much more to them than simply evidences of biodiversity or mere practice of worship. They are more than bits of topography.

The identification of sacred places in Gamo, Konso and Hor shows that we can classify a dozen or more kinds of landscape that are sacred and are handled in that manner. These include homesteads, footpaths, marketplaces, streams, ponds, rivers, lakes, ancestral graves, places of ancestral centreposts, single trees, meadows, tree groves, pastures, fields and crossroads. Each of these landscape elements are connected, and they also has institutional structures that maintain their sustained use. Perhaps the most important point to note is that we should view such landscapes as part of a wider system of tenure. Viewing sacred landscape as part of a system helps us to understand that it is the system that needs care in order to maintain sacred landscapes rather than isolated sacred sites. Sacred spaces make sense only within the framework of a system and institutions which are part of the cultural life of a people who fully engage with their landscape. It is within such a system that a number of guardians of sacred landscapes are supported, and that communities spend significant resources for the maintenance of these landscapes. Such lands, their guardians and communities connect to each other in various ways. While such relationships develop over time, it is often difficult to see how various forms of knowledge merge and help produce effective ways of reproducing society and culture. Here the social and natural order harmonize and yield the necessary effect which reinforces the relation between people and their shared landscapes. During such encounters between people and their sacred landscape one often notes the interconnectedness of many domains of knowledge and experience.

That is why isolating sanctity from the whole of an interconnected system would be reductionist. It would also result in failure with respect to maintaining biodiversity, perpetuating traditions, or building on existing traditions.

The contemplation of sacred landscapes raises many questions. What is not sacred in a landscape? What do sacred sites signify? Why has there been a systematic and concerted effort from the late 1980s to the present to appropriate sacred sites? What makes sacred sites endure? What is the current state of these sites? What is happening to the custodians of these places? Many more interesting questions can be raised that would help clarify the situation of sacred sites, and the cultures that need and keep them at a heavy cost. The clarification of these points, however, is beyond the scope of this presentation.

The situation in the south-west

To give a good grasp of the Ethiopian sacred land situation, we will now explain the particular situation in the south-west. Since the late 1890s much of the sacred landscape in the south was desecrated as it fell under the control of modern

Fig. 2 Gachirach sacred place in Gendo; beer for the fathers of the land. Photo: Tadesse

Fig. 3 Damise Zomba blowing a horn on the Gach'irach sacred land. Photo: Tadesse

church movements which grabbed it for their own religious purposes. In the eyes of the descendants of the earlier custodians of these landscapes, and in the words of present custodians, such as Makko Dogisso Dosha, the author's observations and those of Metasebia and Dessalegn Desisa, the following is noted.

Many sacred landscapes (with the exception of a few currently under the control of Gamo, Konso and Hor/Arbore custodians) have been appropriated by the Ethiopian Orthodox Church. Wherever this has occurred, churches were built on previous sacred lands with or without groves, and in this way, the church appropriated the timelessness and power of these places. Guardians of these sacred sites were left without their traditional responsibility. By appropriating these landscapes the church also stole the indigenous legacy as the keeper of biodiversity. It stole the grandeur of place, which appeared timeless. Acts of this kind have in the past disrupted the economic and political systems of communities in the south, and they are currently causing disruption, as the same church institutions struggle to eliminate indigenous systems of spirituality and economy. They seek to conveniently appropriate history and land, thereby compensating for the loss of followers to protestant churches. Lately however the Ethiopian Orthodox Church has been joined by Evangelical Christian groups in a campaign against the use of these landscapes, despite the existence of a secular system that encourages freedom of worship. The churches have challenged new converts to prove their allegiance by destroying sacred lands (including forest groves), humiliating elders and encouraging disobedience to established norms, all as proof that converts have detached themselves from their past. Abusive songs are often composed that target and humiliate elders and shame those who practise their traditions. Their approach is extremely aggressive, and it is often difficult to believe that this occurs in today's world.

Inappropriate modernization projects

Inappropriate modernization projects continue to threaten sacred landscapes. In the south-west of the country there have been consistent efforts to homogenize not only cultural diversity, but also sacred spaces, by targeting sacred mountain landscapes for state forestry projects, which involve the planting of exotic eucalyptus and juniper. This has contributed to the reduction of mountain pastures and grass species on them, while at the same time considerably affecting the supply of manure to the fields. This affects crop yields because of the appropriation of sacred pastures for such projects.

Moves to hand over indigenous land, including mountain landscapes (mentioned above) and lowland dry season refugia (which experts misunderstand as land left unused because of the farmer's or pastoralist's ignorance), to private investors is causing great fear of cultural loss, not only of spirituality and biodiversity but also of knowledge, property, autonomy and the right to worship. For example, the Ganta, Ganjule and Otchollo peoples of Gamo and the Kore have recently lost the sacred landscape which has been incorporated into Nech Sar Park. This includes all of the sacred sites and paths leading to them, as well as those located along the shores of the Abaya and Chamo lakes where many traditional religious sacrifices were offered. Similar appropriations that fail to recognize the link between the spiritual, economic and indigenous production systems are affecting the tenure system of indigenous groups in the region.

While the Ethiopian Orthodox Church's efforts to dispossess and control indigenous sacred landscapes continues, there has also been increased resistance by the custodians of the indigenous systems of spirituality. They continue to practise their traditions, taking advantage of the political climate, which favours religious freedom. There has recently been a promising development linked to the emerging public interest in this situation. Religious intolerance is beginning to be seen, not as a mere strategy of some religious groups to dominate weaker groups, but as a serious legal issue. The focus of the public seems to aim at recapturing indigenous systems of caring for the country, including primarily their central role in maintaining spiritual traditions. This situation provides indigenous communities with strong backing by creating understanding and awareness between them and the government. It also raises community awareness of legal issues relating to religious institutions and of how the law can protect their interests.

Providing legal services to guardians of sacred places will help secure their autonomy and will establish a system of accountability for those responsible for the destruction of the sanctity and physical health of their landscapes. Currently one of the universities in the country, Debub, has established a Center for the Study of Society and Environment which has made sacred landscapes of the region a focus of its enquiries.

Meanwhile guardians of sacred landscapes, such as our colleague Mako Dogisso Dosha, the hereditary Guardian and Sacrificer at the Muta Sacred Mountain, east of Chencha town in Gamo Gofa, continue to struggle with the clergy of the Ethiopian Orthodox Church to retrieve the Muta mountain and other landscapes from desecration, destruction and appropriation. Muta is one of many locations where the Gamo practise their spirituality and where Mako and his ancestors pray to their God. There is a location on the top of Muta where he had his small *Tsosa Kets* – 'house of God' – and a forest grove where his ancestors in the past made, and he currently makes, offerings of bulls and rams. In January 2005 the Ethiopian Orthodox Church built a structure on the mountain and announced the establishment of a chapel in place of Mako's Muta sanctuary. The clergy assembled new converts, over whom they had religious power, demolished the prayer house of Muta, and chopped down three old

juniper trees that were marked and were part of the sacred land. Makko did not give up his sanctuary, and went to the appropriate indigenous authorities at Boye, who asked him to remain calm until a favourable time could be found for him to be heard. The Church humiliated Mako and celebrated the opening of a new chapel by slaughtering a bull in the style of the Muta offering. When we met Mako after the incident, he and the public felt a total sense of loss. We all cried and comforted him, for it was as though what happened to the Muta sacred mountain was like the loss of a human life, and this struck each of us as a terrible blow.

Together we have secured the site of the Muta prayer house and the vegetation on it, but we have not succeeded yet in forcing the clergy to remove their buildings. The Muta incident, which Mako explained to the gathering in Tokyo (the World Expo Symposium on Conserving Cultural and Biological Diversity: The Role of Sacred Natural Sites and Cultural Landscapes) is one incident in hundreds of similar cases in the region. The Konso sacred landscape and that of the Hor are exceptions. Fortunately, their landscapes are not as threatened, at least not yet. In Hor, the church provoked anger when it built a structure in one of the villages named Egude next to the sacred location of the organization of elders. When people denied them attention they abandoned the place.

Conclusion

Sacred lands in Southern Ethiopia are in distress. The main reasons for this are arrogance and the lack of respect for indigenous spirituality; arrogance and the refusal of religious organizations to abide by the rule of law; and the failure of local officers to protect indigenous people and their religious practices from colonial-style force. This effort to appropriate parts of the sacred landscape is a major reason for the current sense of distress. Modernization, as understood by some non-government organization (NGO) and church partnerships, and as practised in southern Ethiopia, is patronizing, and though supposedly 'civilizing', is not subject to the rule of law. Those engaged in such practices (NGOs, churches, etc.) behave as if they held the authority of the state when they approach indigenous people. At the grassroots level, they are not perceived as just NGOs or churches, and there is a confusion of roles. Ordinary farmers are fearful of their power, especially when it is not clear who these organizations represent, or what they do. They do not evidence a sense of duty or responsibility, or assume accountability for their actions. They choose to ignore the law when dealing with the less powerful, and by remaining ambiguous, accumulate power over the weak.

The solution for the survival of indigenous sacred lands is to seek local and international support for communities, to protect their systems of tenure and to abide by their traditions in order to protect their systems of production and governance from collapsing. They need support to establish a system whereby those involved in the destruction of their physical and sacred landscapes are held accountable. They need the support of experts to help them mediate with government, as their access to and knowledge of the operations of government is extremely limited, and to voice their concerns to appropriate offices.

Sacred sites or places and locations in south-west Ethiopia involve the whole landscape. They reproduce and expand with time when the human encounter with nature is intensified. They also shrink when the powerful destroy systems, as the Muta experience indicates, or where they remain momentarily static, as in the case of Konso and Hor.

Fig. 4 First step to the destruction of sanctity: an Evangelical chapel under construction, Ch'adde, in Gendo on the site of the sacred grove, Chencha. Photo: Tadesse [left]
Fig. 5 A shrinking but thriving sacred grove in Barana, Gamo. Photo: Tadesse [rigth]

Indigenous peoples' experiences on management and co-management of their territories: the Bolivian case

Alfonso Alem Rojo, Fondo Indigena, Bolivia

Bolivia has one of the most contrasting natural and cultural heritages in the world. This landlocked country, situated in the centre of South America, has a population of 9 million and a surface area of 1,100,000 sq km made up of three major regions: lowlands, inter-Andean valleys, and highlands including the Andes. Its twenty-three ecoregions make Bolivia one of the most diversity-rich countries in the world.

In addition, 70 per cent of the population belongs to one of the thirty-five indigenous peoples, with Aymaras and Quechuas making up the largest majority. The indigenous people go back to the pre-Columbian cultures of South America, making Bolivia unique even within the subcontinent.

State institutions and the ruling sectors of society have dispossessed and marginalized the indigenous majority. Despite the prevalent neocolonial structure some changes have occurred over recent years at every level, which have allowed them to become a part of decision-making processes, for example in the preparation of the Constituent Assembly in 2006.

Over the past twenty-five years Bolivia has been working to define a national strategy in biodiversity conservation, moving from a Western-outsider approach, which only looked at aspects of nature, to a cultural approach that embraces local communities in the management of protected areas, made up of mostly indigenous people[1] and covering 17 per cent of the country's territory. Various sources agree that most of Bolivia's parks are inhabited, with at least half of them containing a significant presence of indigenous communities. In many cases, co-management committees have been established and in many others, local communities are claiming to do so. In a few cases, management plans have acknowledged areas of cultural significance within the parks, yet this situation is far from being the norm. Local communities have permanent claims on SERNAP (the National Service of Protected Areas) officials to ensure they implement what are already official policies.

From 1994, when a Constitution amendment acknowledged indigenous peoples' territorial and other collective rights, more than 7 million ha, particularly the lowlands, have been legalized in favour of most indigenous peoples through the new legal category of Community Lands of Origin (TCO). Currently more than 50 claims are being processed by the Agrarian Reform Institute (INRA) that involve around 40 million ha, as a part of the global clearance process of legalizing property rights. All TCO must adopt a zonification of their territories and a management plan. Despite the relatively new process, many communities have already completed these requirements. Interestingly in all these cases, a cultural approach has acted as a cross cutting issue. In most cases, the claim to the existence of sacred places has been taken into consideration in the recognition process of the communities' rights to their ancestral territories.

Bolivia is undergoing an exceptional period of opportunity given the nationwide appraisal of indigenous peoples' awareness of their rights as well as the political will of the government in this matter. However there is also resistance from certain sectors that will be unable to maintain their historic privileges.

Note

1. The National Service of Protected Areas (SERNAP) counts twenty-one national, thirty departmental, nine municipal and thirteen private protected areas. Six of them cover more than 1 million ha and the National Park of Gran Chaco is the largest in the world, covering more than 3.5 million ha.

Fig. 1 Depiction of Andean Culture

Session 4

Water, culture and biodiversity

Indigenous mapping of sacred water

Jim Enote, A:shiwi A:wan Museum and Heritage Center, New Mexico, USA

Summary

Indigenous peoples have been losing access to their sacred places, including sites with sacred waters, often because of maps that fail to recognize the concerns of indigenous peoples. However, there is a new worldwide movement by indigenous peoples to map places that are vital to their cultural and political survival. By simply picking up a pencil and making a map from memory, composing a song, or using modern computerized mapping techniques, indigenous peoples can use indigenous mapping as a tool for advocacy and empowerment.

A young farmer leans on a shovel and gazes across a parched landscape to distant mountains. The anxiety of the dry season and the sight of clouds over the mountains make him envious. He thinks to himself, why can't the rain fall on my fields? Seeing the veils of rain falling on the mountains, he takes a deep breath and understands that the rain, for the time being, is only for the mountains.

The dry heat has drained his energy, and with difficulty, he walks to the nearby village spring for a drink of water. He kneels at the spring, sprinkles droplets of water over his head, scatters a few more skyward and then takes a drink. At that moment he feels the droplets as rain and is satisfied, and the envy goes away. Etchings and drawings on nearby rock walls testify to the long use of the spring. Staring into the pond he sees himself and visions of his ancestry. He leaves a portion of his modest meal in the water for his ancestors; the water will be a conduit for his offering.

Later in the day he asks his mother if the spring has always brought water to the village. The mountains, he is told, are places where cloud beings live, and if the people of the village deserve it, they will be blessed with clouds and rain and ultimately water from springs. For now he should not fear the future but rather accept what may be.

If the mountains and springs are cared for and prayed to in the correct way they will serve the people for as long as the people remain in this place. This spring and the waterways and all the trails that lead to and from this spring are umbilical cords connecting the people to the womb of earth and ancestral voices.

Water is an ultimate place of reference. It is the most important element in our lives, and defines where we centre our societies and communities. For many people, water is a place. Often villages and cities are named as places of water: *K'ya'n'a* (Zuni: by the spring) *Minakami* (Japanese: upstream). I live in a very dry area and for me heaven is a place that is immersed in water.

Cultures around the world, whether they are based in one place for a long time, nomadic or migratory, are constantly checking the pulse of the universe in their own way. Water is frequently tasted and felt; using these sensations people use water to monitor the world around them. Waters of Mother Earth, personifications of water, define water in familiar and culturally relevant terms. Indigenous people nurture and respect these connections because this relationship is essential to maintain the health of their home territory and ensure their survival.

In some indigenous communities water takes on forms that are not always liquid. In colder regions water can be frozen and solid for long periods. In this situation water can become a place.

Water is a dimension within which I can travel literally and metaphorically. Prayers and messages can be carried in water and I know spirits bringing blessings can come from water, often in the form of rain. In a spiritual sense water can be a sacred space as well as a sacred place.

Water delivers and carries away, from the sky and from the earth. Water is in our breath, blood, saliva and mother's milk. Water is the conduit for sending offerings, and for many believers water carries us back to our elemental beginning.

Fig. 1. Zuni rock art [left page, left];
Fig. 2. Dowa Yalanne (Corn Mountain) Zuni, New Mexico [left page, right],
Fig. 3 Zuni artesian spring [above left]
Fig. 4 Kaua'i, Hawai'i [above right]
Fig. 5. Mid-winter at Chevak, Alaska [below left]
Fig. 6. Sacred confluence of stream and river [below right]

If you talk with indigenous people around the world, invariably you will find they have certain beliefs and rituals associated with sacred waters. Up until recently sacred waters have been perceived as incidental to the conservation and development process. However, some workers within the conservation and development movement are seeing the importance of sacredness as a means to connect humanity more fully with governmental and non-governmental conservation and development agendas. The task now for these groups is to accept, understand and promote 'sacredness' as a cooperative means to conservation and development.

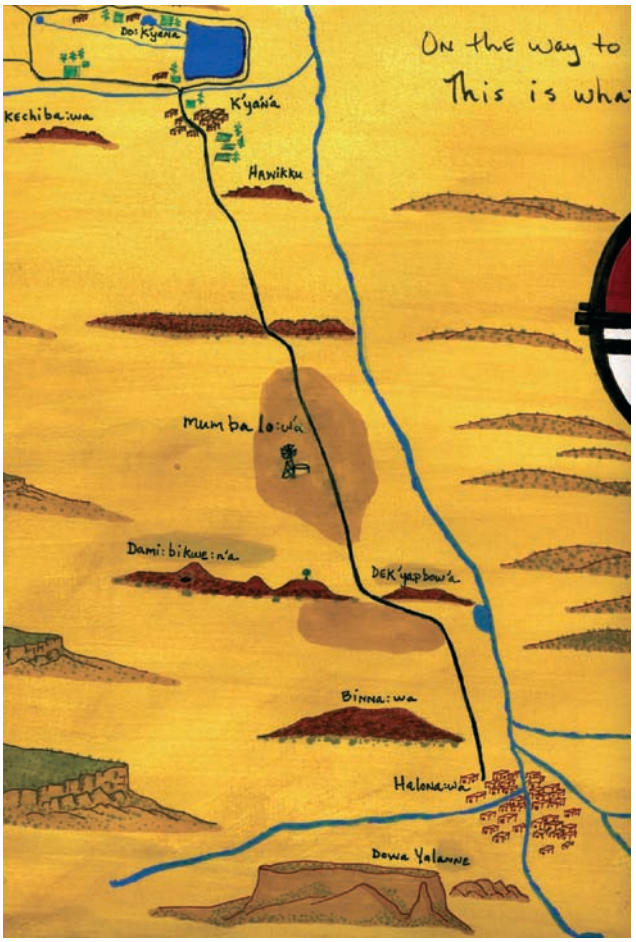
The conservation and development action agenda attempts to conserve natural resources to allow people to meet the needs of today without compromising opportunities

for future generations to do the same, while simultaneously lessening unnecessary burdens. The worship, protection, and use of sacred places complements conservation and development, and can form the basis for collaboration. Protecting the sacred areas of indigenous peoples is slowly gaining attention, and creating linkages with sacredness, sacred places, indigenous knowledge and science needs to become a priority policy area for progressive facilitators, policy makers and modern societies.

Water is life, as we have always heard. Water is also a basic right of life and yet there are growing demands for water as the world's populations and economies continue to expand. Much of the water needed for this expansion originates in the territories of indigenous peoples. One way to add power to the voices of indigenous people is to create maps that counter established maps antagonistic to indigenous peoples' interests. But how should we map? What elements should not be mapped? Are we capable of mapping?

Indigenous peoples have always had maps. We have had songs, chants, prayers, migration stories, shell arrangements, drawings on hides, drawings on wood and stone. These maps aid our memories; they give reference to our places of origin, places we have visited, and places we hope to go. They also provide us with a reference of where we are within the universe, and help to define our relationship to the natural processes surrounding us – and because they are ours they function in our own languages and use scales we can relate to.

But over the past 500 years or so we have been remapped. Throughout the world indigenous names of places and their meanings, which had been our home for generations, have been all but eliminated from mainstream use. In their place we have been given a new set of maps, with a new set of names that reflect other values and ways of seeing the world. For the most part, these names are foreign and disorienting to us. In many cases they are also a direct denial of our history and presence, for along with



the new names and new maps came new assumed ownership and control of our territories and waters.

Today, in indigenous communities throughout the world, there is a movement to reverse these losses of land, water and culture, and distortions of our history. It is a movement that is at times slow and halting, a movement that faces political, cultural and economic obstacles, but it has begun. Indigenous communities now have the know-

how and interest to create their own maps using the media of their choice. A major challenge however is having these maps recognized as legitimate sources of evidence in courts of law.

In my own community in Zuni, New Mexico we are mapping to educate young Zunis about the importance of water and the protection of sacred water places.

At the native Hawaiian community of Ha'ena, community members are mapping to protect watersheds and sacred sites from over-development and to reestablish Hawaiian place names.

At the Cupik Eskimo village in Chevak, Alaska, the community is mapping to protect their aboriginal lands and waterways, recently designated a US government wildlife refuge.

Major natural events including droughts and floods are often referenced using physical landmarks. In the language of indigenous peoples, watermarks on cliffs, sand dunes, alluvial fans or springs, to name just a few, are part of the collective pattern language of the landscape, and part of a map of environmental and cultural pressure points. From the memory of these patterns, natural events are better understood, maybe not so much in scientific terms but within a visceral landscape vocabulary of indigenous peoples. This wisdom may appear unimportant to many people, or at best it may be subjugated to a class of 'ethno-science'. Whatever the interpretation, the memory of sacred places, sacred waters and the wisdom of stories associated with sacred places are vital to the continued survival of countless indigenous peoples, and perhaps for the survival of all humanity and the environment that supports us.

Note

All photos by Jim Enote, Indigenous Communities Mapping Initiative.
Photos cannot be reproduced without prior permission from the author.

Fig. 7 Navajo wedding basket [left page, left]

Fig. 8 "On the way to our fields. This is what my grandfather told me"[left page, right]

Fig. 9 Reviewing community made maps on the island of Kaua'i, Hawai'i [above left]

Fig. 10 Intergenerational use of community made maps. Chevak, Alaska [above right]

Fig. 11 Sunset over calm water at Zuni, New Mexico [below]

Sacred lakes and springs in the northern Andes and the Huascarán World Heritage Site and Biosphere Reserve, Peru

Jorge Recharte, The Mountain Institute, Peru

Introduction

In the northern Andes of Piura in Peru, we can engage in what is perhaps the most vigorous shamanic tradition of the Andes. Today, these religious practices are strongly associated with rituals of purification in the 'sacred lakes' of the *paramo* ecosystem. These religious practices illustrate an explicit linkage between spiritual power and the non-use of these sacred lakes. As we move south from Piura towards the central highlands of Peru we encounter the sharp rise of the Andes mountains in the Cordillera Blanca, the largest collection of tropical glaciers in the world. This range was designated a National Park by Peru in 1975, and was later recognized as a Biosphere Reserve in 1977 and a World Heritage Site in 1985. This park protects the *hallqa* ecosystem, which is similar to *paramo* and is the subject of comparative narratives and performances concerning sacred sites and concepts of the 'wild'. I shall rely on experts' ethnographic data and interpretation (notably Polia, 2001 for Piura and Walter, 2003 for Huascarán) for descriptions of both sites, as well as my own perspective from discussions of these issues with people and communities of the Pacaypampa district in the Ayabaca province of Piura, and the community of Vicos in Huascarán.

Wachumo, sanpedro, curanderos and the sacred lakes of the northern Andes of Piura

It is in the sierra of Piura that the Andean range reaches its lowest elevations, at 2,500 m at the Purcuya pass, therefore creating an east–west geographic corridor that facilitated the flow of plants, animals and ideas between the Amazonian and Andean regions. Mountain tops in this region rarely exceed 4,500 m above sea level (masl). The ecosystem located roughly 3,000 masl is the *paramo*, a mosaic landscape dominated by grasslands dotted with lakes, wetlands, springs and cloud forests. At an ecoregional scale, with an island-like distribution, *paramos* extend along the crest of the Andes from Venezuela to Colombia, Ecuador and northern Peru, including the northern sections of the Huascaran Biosphere Reserve (Hofstede et al., 2003).

A comparative analysis of the conservation importance of South American biomes by Dinerstein et al. (1995) ranks the *paramos* ecoregion as outstanding on a global scale and of the highest conservation priority at a regional level, given its conservation potential relative to other biomes. More specifically, *paramos* are characterized by high levels of endemism (for example out of 3,000 vascular plants 60 per cent are endemic). Large emblematic animals that characterize the *paramos* ecoregion, can still be found in the mountain areas of Piura and are associated with healing rituals, include the condor (*Vultur gryphus*), spectacled bear (*Tremarctus ornatus*), puma (*Felis concolor*) and mountain tapir (*Tapirus pichaque*).

Peasant families living below the *paramos* of Piura received land grants in the early 1970s as part of the agrarian reform process. Since then, a steady climb of farms and deforestation has taken the agricultural frontier up to 2,200 masl, still a few hours walk below the wild *paramo*, the habitat of physically and spiritually powerful animals, like the spectacled bear or the puma. To some extent colonization of the *paramo* is held back by the perception of these lands as wilderness, places of spiritual and physical risk. While their geographic and ideological remoteness make *paramo* lakes a sphere separate from the domestic routine of most people, this is, by contrast, the territory of those persons who, being like other people in any other respect, have discovered and cultivated over a lifetime the gift to mediate with the spiritual forces and resources inhabiting wilderness.

These men (and women to a lesser extent) are known as *curanderos* (healers), *maestros* (wise men) or *chamanes* (shamans). They become healers both upon the discovery of their capacity to see the spirit that resides in the *sanpedro* or *wachumo*, a hallucinogenic cactus (*Trichocereus pachanoi*), and

through their desire to heal others and the hard work of learning the healing secrets of ritual performance. Clearly, one becomes a healer out of 'love for the other'. When visiting these *paramo* sites, and especially the sources of water in lakes, the performance of rituals and discourses makes it very clear that one is entering the territory of the sacred, what is without use, virginal, and hence charged with the power to clean and purify.

Sanpedro grows at altitudes ranging from the coastal dales to the dry areas of inter-Andean valleys, yet it can be transplanted to higher altitudes where it is grown in 'gardens'. These are not the typical home gardens we tend to think of, but rather secluded areas in farm plots where the plant is transplanted and then collected when needed, as in the 'garden' of Figure 1 where the original transplant had taken place over fifty years ago.

It is fairly common among peasants of this region that if any serious problem or issue haunts the family and requires interpretation (to see the *suerte*), they consult with a healer to seek a remedy. The healing process often involves first, ritual drinking of the *wachumo* (or *achuma*), and a ritual trip to the *paramo* lakes and springs. The whole process involves the patient and his or her family, who will also have to spiritually support (as an expression of their love to the one who suffers) the efforts of the healer during the lifting (*alzada*) of the patient. This they do by inhaling tobacco and alcohol to liberate the patient from those forces that have downed the person. The healing goal consists, for example, in bringing back the patient's shadow (*sombra*) to the body, or in helping the patient in his or her 'blossoming' (*florecer*, *florecimiento*).

The details of the remedies (*pusanga*) that are to be prepared with different combinations of medicinal plants, as well as the details of the subsequent healing rituals and their exact location, time and format in the *paramo* lakes, will be revealed to the healer by *sanpedro*. The healer may have his own secluded and thus powerful places in the *paramo* or in other areas below that he knows as sites efficacious for performance. Lakes are known as, first, those that are favourable for carrying out healing rituals properly (*lagunas de despacho*) and second, those that are good for propitiatory rituals (*lagunas de florecimento*). The latter are rites that help bring in good rains and harvests, or

Fig. 1 A *sanpedro* cactus grows in a retired farm plot. The cactus is harvested from this 'garden' which was planted by the grandfather of the owner and grew from that time into several plants.

the multiplication of animals, or the prosperity of a business initiative, or nurture felicity in one's heart. Following a vision (*sueño*) the suerte, revealed by the *wachumo*, the healer will tell the person who is seeking to improve his or her lot to go with him to a certain lake and swim in the frigid waters of the lake in certain directions or a certain pattern, so many times, then perform the poetic ceremony of 'blossoming'. This involves a language of performance that calls for the mouth-blowing of perfumes to create an aura of good smells and the raising of the arms in a 'V' shape, towards the heavens, and a discourse that speaks of affirmative becoming ('We are blossoming …'). Thanks to iterative metaphors concerning the purity of the lakewater, the beauty of *paramo* flowers, the strength of rocks or bears, and so on, these enunciations pull up – lift – the being of those participating in the ceremony. The use of perfumes or lime fruit is central to all these rituals in the lakes, and shows an interesting connection with notions documented in the Cordillera Blanca of the association of wilderness and these high landscapes with dangerous odours.

Healing is led by the healer, yet this is also a collective effort which is sustained by the love of those involved in the healing: the patient's family or friends who drink *wachumo* with the healer, and then, a few hours afterwards, may also have to inhale tobacco macerated in alcohol. It is only the strongest (physically and spiritually) on whom the healer calls, among the participants, as 'lifters' to help him throughout several inhalations required to 'lift' the patient.[1] It is the spirit or *encanto* residing in the *wachumo* cactus, presenting itself to the healer and those who drink its juice, that reveals in this vision the nature of the problem at hand, the heart of people around the patient, and often the origin of the envy that created disgrace.

The *encanto* may take the form of an Inca, who is also the incarnation of the healer himself. Incas are associated with the interior of lakes and the earth, where they were relegated by the end of their era, at the beginning of the Christian era, with the Spanish Conquest (Polia, 2001, p. 101). Before the era of the Incas, people of the previous time of the Wari were equally relegated to the interiors of the earth. As noted by Polia (2001, p. 123), the name of one of the most famous groups of lakes in Piura, because of its healing powers, is precisely the Huaringas (*wari-inka*).

All these places with power are *waka*, monolithic rocks with special human or other forms. 'The *wakas*, whether they are crags, stones or mountains, are hungry and if men do not feed them, then they eat up the soul, the shadow, sucking life from their bodies' (Polia, 2001, p. 105). Lakes and water are at the centre of this ritual, and the symbolic systems and concepts displayed during their performance. Most notably the inhalation of the tobacco macerated in alcohol is done in ocean shells, known as *arte* (art) or *toro* (bull), receptacles that are 'daughters of the water' and point to the link of highland lakes to the ocean, the mother and origin of all waters (Soldi, 1980). *Paramo* lakes and springs are strongly associated with the reproductive powers of herds (llamas in pre-Hispanic times, and the prestigious bull and other animals like sheep since colonial times). These water sources are *illa*, or places from where magical bulls or llamas surge at night from underground, sacred sites that must receive tribute from humans.

It is a plant of the lowlands, *wachumo*, that becomes the mediator for excellence between humans and the powers residing in high and remote mountain places. This is a role similar to that played by coca leaves, also a crop from the lowlands, in the Cordillera Blanca, where a similar set of rituals is practised as part of the relationship of men and women to high and remote mountain areas charged with spiritual power.

What remains at the core of this cultural behaviour, here presented in summary form, is described by M. Polia as 'a behaviour dictated by a profound respect towards all that does not belong to the human species' (2001, p. 39, my translation). The hidden nature, the soul or *encanto* of sacred animals (such as the puma or condor), plants (certain specific trees), minerals (such as *wakas*), or water forms (lakes, springs and waterfalls) is revealed to humans in dreams by the grace of *sanpedro*, *wachumo*, by means of the symbolic formats that have taken form throughout prehistoric and historic times in this part of the world (Polia, 2001, pp. 42–57).

High mountain landscapes as the territory of ancestors and wilderness in the Huascarán Biosphere Reserve

The ethnological study by Walter (2003) on the conceptions that Cordillera Blanca peasants have of nature poses the argument, and provides extensive ethnographic materials to document it, that the mountain peaks, glaciers and lakes of the *hallqa* (the ecosystem equivalent to the *paramos* of Piura), are associated with dangerous spiritual essences belonging to previous cycles of humanity that were ended by a cataclysmic flood or the burning of the first sun. These are cannibalistic spiritual entities residing beyond the limits of domesticity in the interior of mountains, lakes, crevices and springs, which are menacing to humans and thus require constant appeasement. In this ethnographic narrative, mountains and nature appear as cruel and menacing as a result of their association with these ancestors from a previous divine creation. These ancestors were displaced by the current people, and were forced to hide in the dark interiors of remote mountain sites in order to escape complete oblivion from the sun or flood.

Ethnographic fragments of this narrative have been documented all over the Andes, including the northern regions of Piura, where these are described as giants of a prior era (*wari*) who were relegated with their treasures to the solitude of glaciers by the creator, or who were transformed into rocks by the drive to civilization of the Inca. Similarly, with

the onset of the current Christian era, which displaced that of the Inca, the latter also hid themselves and their treasures underground, in lakes and remote mountain sites (Polia, 2003, pp. 95–96). These dead and displaced ancestors from a former era try to recover the ground they lost by eating up or sucking the spirit of those who live in valleys and work under the sun and light. Therefore, the relationship of humans to remote high mountains and lakes as places where enchantments (*encantos*) reside is a dangerous one. According to ethnographic narratives (Walter, 2003), there is a need to domesticate the wilderness of these high places through the ritual use of salt, or to appease it with offerings of coca, tobacco and alcohol.

The ancestors who were burnt by the raising sun during the creation of the Inca era have control over these wild and remote places. They are identified in the community of Vicos with the *achachii* (fear), a devil figure sharing features of the being known as *awiichu*, *abuelito puma-awiichu*, or puma-grandfather (Walter, 2003). These demonic beings live in those places where humans never go, like the highest peaks or in rocks of extraordinary size that are *apu*. It is in these kinds of places, and during the night, that they take care of their animals. In Vicos they claim that the *achachii* has herds of wild animals: 'the condor is the chicken of the *apu*, the viscacha his *cuy*, the fox his dog, and the puma his cat,' a concept documented by Walter in great depth and detail in the character of the *awiichu*, the ancestor character. Of all these wild animals it is the taruka deer (*tarush*) (*Hippocamelus antisensis*), a species threatened with extinction, that is most strongly associated with the high and remote places of the *hallqa* grasslands. These high mountain places located above the domesticated farming areas of the valleys are strongly associated with the notion of hunting territories, and of all prey, *taruka* is the most wanted for its flesh and the curative powers of its fat. In Vicos, before they had access to rifles in relatively recent times, people hunted the *taruka* with trained dogs, and the techniques used are still remembered in great detail.

The *awiichu* is also the owner of wild plants that grow in high places, like *rima rima* (*Krapfia weberbauerii*), *waman ripa* (*Senecio tephrosioides*) and *riqrish* (Walter, 2003, p. 102). If these plants are collected and consumed in excess, then *awiichu*, their owner, may cause flood or hail to fall on people. Similarly, when people go to places where humans do not normally go, such as in the vicinity of glaciers, there is a high risk that if the mythical taruka deer appears, it will suck out the spirit of the unfortunate person, inevitably causing death.

Clearly, then, in the Cordillera Blanca the high mountains associated with the wilderness are sites of spiritual danger. This is illustrated by Walter's stories of *achikee*, the saga of two children who manage to escape from a cannibal witch (*achikee*) who is trying to boil them in a cooking pot (2003, p. 37). After a failed pursuit of the children, the witch finally crashes as she falls from heaven, breaking into pieces. Her broken bones created the mountain range of the Cordillera Blanca; her hair, all spiny and stinging plants and poisonous insects. Mountains are thus also seen as gigantic cooking pots holding boiling water in their interiors, water that can explode into avalanches.

Wild carnivorous animals, like the human-eating witch, and some wild plants of these high, remote and dangerous places, are associated with pestilence. More specifically, this pestilence is similar to the dangerous stench of the bones of the ancestors, who can always suck life from the living if not properly fed (Walter, 2003, pp. 99–101).

Local perspectives on traditional religious practices and nature conservation in the northern Andes

I am in Vicos one Saturday afternoon. There is heavy rain outside, perhaps one of the last rainstorms this season in the cordillera, and I am chatting with Pedro, Manuel and Juan about this paper for UNESCO. They are all wise in their knowledge of this magnificent mountain range and its spiritual dimensions, so I wanted to explore with them the sense of connecting their religious beliefs about wilderness in mountains with conservation, and this with community priorities as they saw them. I did the same exercise in Piura, meeting with peasants from several communities. Here I would like to present my personal interpretation of these perspectives, although they require further articulation and the design of mechanisms to commit the local leadership to interpretation and direction for any potential action.

It is clear that there is in the northern Andes a wealth of knowledge, as yet fragmentary, on the corpus of religious beliefs concerning the spiritual dimension of mountain landscapes. In Piura and the adjacent regions that coincide with the cultural spread of *sanpedro* use, narratives and performances are robust. In Piura these beliefs permeate life to the point that, for example, not even people active in their respective catholic or protestant local churches see a contradiction in nurturing these traditions. These practices have such prestige that there was a case of a former president of Peru who a few years ago came to these lakes to take a ritual bath, to build his political clientele by showing interest in these popular beliefs.

By contrast, in the Cordillera Blanca, in communities like Vicos renowned for a strong continuity of traditional ways of life, local residents who are knowledgeable about these narratives and practices perceive that profound transformations have already taken place, so that knowledge in their own generation is thinner and worse among younger people. Walking with Pedro, Manuel and Juan up into Quebrada Honda, the high lands of the community, they explained that only a couple of generations ago, until about the 1950s, whenever community people came into Quebrada

Honda, before drinking the water of Bandera Yaku, right at the entrance point of the *hallqa*, they paid the spring with flat stones resembling coins, saying, 'Please sell me 20 cents of water, 30 cents of beer please.' Equally, if one was in the vicinity of Llamarara (Figure 2), which is a prehispanic *illa* near a cascade, people could equally pay coca, tobacco and alcohol in the hope of capturing its *illa*, the spirit, of a llama, bull or lamb, in order to take it into their personal herd where it might lead to the magical multiplication of the animals.

As the climb continues into the higher points, in approaching the steep climb before the high pass of the range, people also paid with stones and coca at the cross at Virgen del Socorro, a powerful site associated with the climb, which draws the energy of humans and animals to the point that they could even die. My companions concurred in saying that all these performances are going away from everyday life in Vicos. Yet, contrasting with this opinion, walking back to the town we stopped to visit the owner of a stone that had been embedded in a bridge near his home. The bridge was destroyed year after year by the river until he dreamed of the spirit in the stone, who told him who he was [a certain saintly person] and of his desire to be removed from the bridge foundations. And so the owner did, after consultations, and the stone is now a rock cross that sits inside a small private chapel.

Much the same story can be heard from a weaver just a short distance from this place, who will proudly take you to his shrine where he holds a saint-stone and a smaller *illa*-stone which he also recovered thanks to similar dreams. In talking about all this, Pedro explained that '*las piedras tienen corazón*' (stones have a heart), and 'they may seek you – but they can also walk away from you on their own'. This is faith: my personal faith in this field trip.

I brought forth this evident ambivalence to Pedro, Manuel and Juan: on the one hand their opinion that people today know and care less about these ancient beliefs, and on the other hand, the profundity that this faith still has in their everyday life. I asked if there was anything that had to be done in the face of these changes.

Their position was strongly in favour of reconnecting the young with this wealth of beliefs, yet pointing to the fact that this had to be part of efforts to improve their well-being, for example through tourism.[2] This latter position takes us into a second ambivalent conceptual field, which is that in the Andean paradigm the power of the sacred becomes active in those places where humans are not present, and hence in the midst of the wilderness. Yet at the core of local priorities is material progress: roads, electricity, education, the internet, increased connectivity, the promotion of tourism and so on.

People I interviewed articulated the idea, both in Piura and Ancash, that it is the silence of vastness and emptiness created by lack of human presence in remote places that is the condition from which these sites draw their spiritual force and sacredness. Similarly, it is the purity, the non-use by humans of springs and lakes high in the mountains, at their source, that confers on the lakes in Piura their capacity to hold spirits with the power to heal humans. Conversely, it is the presence of roads, the smell of petrol, the noise of motors that make these places weaker or powerless. Equally, the profound transformations that have taken place in the everyday material culture of Vicosinos in recent decades are inevitably associated with the perceived lack of interest of younger people in traditional beliefs. Thus, time is now measured and embodied by Vicosinos through the use of watches and will soon, with the recent arrival of television, be ruled by programme schedules. In the recent past domestic time was organized by the call of the rooster, and after that, by the time that elapsed between one coca chewing session and the next. 'It is incredible,' said Manuel, 'but time doesn't last any more. Now one day is like an hour.'

In my view there is no question about the pre-eminent priority and the positive value that peasant communities place on material development and access to fundamental public services, yet they are equally appreciative and respectful of the cultural heritage left by their fathers and mothers.

The challenge we have at hand is that there is in the Andes a rich, autochthonous religious vision of sacred mountain sites, yet this is fragmentary or in profound transformation. In this context, the fundamental issue is that it is the holders of these traditions who have the right 'to be the interpreters of their own life, of the dealings that relate to it, and to be the owners of the world in which it unfolds' (Polia, 2001, p. 16). Nature preservation, its non-use by humans, is fundamentally compatible with the values and concepts structured around Andean narratives of the sacred and of wilderness. Our challenge as external entities is how to nurture the democratic context and processes that can facilitate the identification of a local vision of spirituality and conservation that honours authenticity.

Notes

1. Healers charge a fee for their service, as do some of the people who also help in ceremonies with the inhalation of alcohol-soaked tobacco, as *alzadores* or 'lifters'.
2. Their position was also informed by their own positive experience with Urpichallay, a non-governmental organization supporting activities relating young people to their cultural traditions.

References and further reading

Dinerstein, E., Olson, D. M., Graham, D. J., Webster, A. L., Primm, S. A., Bookbinder, M. P. and Ledec, G. 1995. A *Conservation Assessment of the Terrestrial Ecoregions of Latin America and the Caribbean*. Washington DC, Worldwide Fund for Nature (WWF) and World Bank.

Hofstede, R., Segarra, P., Mena V. Y. P. (Eds.). 2003. *Los paramos del mundo. Proyecto Atlas Mundial de los Páramos*. Quito, Global Petland Initiative/NC-IUCN/Ecociencia. (In Spanish.)

Polia, M. 2001. *La sangre del condor. Chamanes de los Andes*. Lima, Fondo Editorial del Congreso del Perú. (In Spanish.)

Soldi, A. M. 1980. El agua en el pensamiento andino. *Boletin de Lima*, No. 6. (In Spanish.)

Walter, D. 2003. La domestication de la nature dans les Andes péruviennes. *L'alpiniste, le paysan et le Parc National du Huascarán.* Collection Recherches et document - Amériques latines, Paris, L'Harmattan. (In French.)

Fig. 2 Llamarara, an *illa*, site of magical origin of the llamas' spirits and their reproductive power, is located in a cliff near a waterfall above a glacier valley in Vicos, Huascarán National Park. In the base of the rock lay the remaining bones of an ancient mummy from the time of ancestors [left]

Fig. 3 The rock in the middle of these two crosses was placed in this church only a few years ago after it presented itself to a man of Vicos in dreams asking to be removed from the foundations of a bridge near his home. A chapel and altar were built for the stone following the ancient, pre-Hispanic, pyramidal platform shape [right]

The phenomenon of sacred sites in Kyrgyzstan: interweaving of mythology and reality

Gulnara Aitpaeva, Aigine Public Fund Research Center, Kyrgyzstan

Summary

This paper explores the role of *Mazars* (sacred sites) in the contemporary social and spiritual life of the Kyrgyz. Based upon recent ethnographic research in the Talas region of northern Kyrgyzstan, the paper argues that *Mazars* perform an important function in enabling local residents to deal with the emotional, psychological and physical consequences of a profoundly destabilizing post-Soviet 'transition'. Despite the significance of *Mazars* to the sacred life of the Kyrgyz, they have rarely been studied and are not protected, or even registered, by the State commissions dealing with religious affairs.

Our research indicates that *Mazars* are visited by Kyrgyz people, both men and women, of all ages. The paper contains ethnographic accounts of infertile women who attend *Mazars* to regain their fertility, of alcoholics who are cured of drinking problems, and of people who simply want to gain a sense of spiritual renewal. *Mazars*, which may be either natural or human-made, are an element of pre-Islamic culture that has survived and coexists with both formal Islam and the official atheism promoted by the Soviet state. It is quite common to find both the Koran and the indigenous *Manas* epic coexisting in ritual practices observed at *Mazars*. There is strong evidence that *Mazars* played a crucial role in the spiritual life of the nomadic Kyrgyz, coexisting with ancestor worship in this strongly patrilineal society, and that their very lack of formality helped them to survive Soviet attacks on formal religious institutions.

This research represents the first large-scale fieldwork to be undertaken by the recently formed non-governmental organization (NGO), Aigine. Over 200 *Mazars* have been identified in the region, which has a population of 200,000. The sheer volume of these sacred sites attests to their continuing importance as a source of spiritual and emotional energy to the population.

Introduction

Definition

In Kyrgyzstan, a sacred site is usually called a *Mazar*. *Mazar* is a word from the Arabic, which means 'place which is visited'. It is an object of pilgrimage, usually the grave of a Muslim saint (Abramson, 1990, p. 151). Later, a more specific notion of a *Mazar* as the 'place of *shahid's* burial' appeared. Over time the word came to be used to designate any place with a sacred character. There are now two types of *Mazars*, and they are located all over the country:

- *Mazars* of natural origin: springs, mountains, gorges, stones, trees, lakes and so on
- *Mazars* which have been created by people: graves of prominent personalities, ancient buildings, places of death or burial of innocent people.

Antiquity and uniqueness of the cult of *Mazars*

With the collapse of the Soviet Union, new Central Asian countries began to rediscover their identity, both politically and religiously. A revival and sometimes even an eruption of religious feelings was observed throughout the whole post-Soviet space. In Kyrgyzstan, which peacefully passed from Soviet status to independence, a religious revival resulted in the reutilization of sacred sites. During the period of transition from atheistic totalitarianism to an independent state with freedom of religion, the cult of *Mazars* became one of the most prominent.

From the sources of ancient Kyrgyz culture, as well from traditions and rituals, we know that prior to the 1917 revolution, the cult of *Mazars* was also very widespread. On the one hand, the creation and worshipping of constructed *Mazars* was an effect of the cult of forefathers. On the other hand, worshipping at sacred natural places was related to the cult of nature (Grof., 1995, pp. 334–53, 307–22).

Mazars: a live unexplored tradition

The simultaneous antiquity and modernity of *Mazar* worship

shows that this is a phenomenon of rare stability and universality throughout Kyrgyzstan. What are the roots and reasons for this stability and universality? How many *Mazars* exist in Kyrgyzstan? When and how were they created? How many people visit *Mazars* and why? What are the mechanisms of *Mazar* function and development? What is the policy of the authorities toward the cult of *Mazars*? What are the ecological, social, cultural, religious and spiritual roles of *Mazars* today? It is currently impossible to answer these and many other questions. Paradoxically, *Mazars* have effectively not been studied as a social and spiritual phenomenon, even though the cult of *Mazars* existed and exists today on the territory of Kyrgyzstan as indisputably as, say, Lake Issyk-Kul or the Ala-Too mountains. It is interesting to note that the State Commission on Religious Affairs under the Government of the Kyrgyz Republic registers all more or less significant phenomena in the domain of religion, yet it has not recognized *Mazars*. The reports of this Commission contain detailed information, including statistics, for example on Islam, the Russian Orthodox Church, Catholic, Judaist, Buddhist and Bahai communities, and on Protestant organizations and foreign missions and missionaries (Mamayusupov, 2003), but *Mazars* have never been recognized by the State Commission of Religious Affairs.

The mission of Aigine

The publicly funded research centre Aigine (which means 'clear', 'definitive') was created in the spring of 2004 to answer these and many other questions. It is sponsored by the Christensen Fund, based in California, USA, and its mission is to study and promulgate little-known aspects of the diverse cultural and natural heritage of Kyrgyzstan. As part of this it aims to carry out a comprehensive and thorough study of the *Mazar* phenomenon in Kyrgyzstan. In 2005 Aigine focused its work on the *Mazars* of the Talas Oblast[1] of the Kyrgyz Republic.

Quantitative indicators

Talas Oblast is one of the seven *oblasts* that make up the country. It is the smallest of the seven, and is divided into four rayons. The territory of the *oblast* is 11,400 sq km. It is situated in the north-west of the country (Moscow, 2001, p. 10), and includes ninety-eight villages and the city of Talas. Our primary field work showed that there were 225 *Mazars* in the *oblast* and there are *Mazars* in all four *rayons*. Table 1 gives the number of *Mazars* and population by *rayon*.

Based on this data, it can be seen that there is one *Mazar* for approximately 900 people and one or two *Mazars* per settlement in Talas. However, not all 900 people visit each *Mazar*, nor is there a *Mazar* in every settlement, but the number of sacred sites itself suggests that *Mazar* worshipping is a live and pervasive tradition.

We do not have similar quantitative data for other *oblasts* as yet for comparison. However, even without data for comparison, it is easy to see that the number of *Mazars* in Talas Oblast is large. What 'quality' – in other words which social, cultural and other processes – is behind this number?

Visitors to the *Mazars*

Our fieldwork on more than fifty *Mazars* of the *oblast* shows that they are visited by people of different ages, sexes, social status and ethnicity. Our fieldwork indicates that the main reasons for visiting *Mazars* are health, fertility, well-being of the family and relatives, and an internal need to visit places considered to be sacred.

Health

More than half the respondents emphasized that the main reason that brought them or their relatives and friends to *Mazars* was an illness nobody could cure. Omurbubu, a 37-year-old woman, came to a *Mazar* for the first time because several of her pregnancies had ended in miscarriages. She had visited all possible specialists, including both doctors and natural healers, but no one could help her. During that period, Omurbubu had dreams that she was embraced by dead people. Learning about her dreams, her father-in-law said: 'We must make a sacrifice to God and the spirits of our forefathers; otherwise, it will all be in vain.' They visited the Kyzyl Choku *Mazar* (Red Peak), where they made a sacrifice and begged the supreme forces for cure. Soon after that, Omurbubu gave birth to her first-born daughter. Nowadays she visits *Mazars* regularly, and says she has visited over sixty sacred places.

Rayon	Talas Oblast	Kara-Buura	Bakay-Ataa	Manas	Talas
Population (000)	199.9	49.9	38.9	28.4	82.7
Total number of *Mazars*	225	51	36	61	67
Natural *Mazars*	197	42	35	58	62
Human-made *Mazars*	18	9	1	3	5

Table 1. Population and *Mazars* in Talas Oblast

Half the male respondents visited *Mazars* for the first time in order to cure alcoholism. The story of Jumadil, a 50-year-old man, is typical. 'Once, I was 43 years old at that time, we were at one of my friends' houses and drank. When I felt I was getting drunk, I went out. It was around 10 p.m. I do not remember what happened thereafter. When I woke up, I found myself lying 15 kilometers away from the village, in the bush at the beginning of the Talas River. I was undressed as if I were at home. Astonished by that, I stood up and got dressed. The sun was rising. I do not know how I got to that bush, how I crossed the full-flowing river and how my clothes stayed dry. I got to the main road, took a bus and returned to the village. Next morning I woke up very early, did not say anything to anybody and made my way to the Kanykei Spring. There I made an ablution and took an oath never to drink again. Since then, I have not drunk even lemonade, let alone vodka. Since then, I have believed in the holy salutary power of the *Mazar*.'

Of course such stories are always individual, with different details and circumstances. However, the story-tellers themselves typically believe that at the *Mazars*, or because of their closeness to *Mazars*, something happens to them that radically changes their attitude to drinking alcohol. *Mazars* helped these men accomplish what neither medicine nor family could do: they gave up drinking.

The salutary effect of natural sacred places on people suffering from alcohol and drug addiction is now actively used in medical practice. A famous doctor specializing in narcotics, Nazaraliev, established a ritual of visiting a sacred place near Bishkek (the capital of Kyrgyzstan), and introduced it as a compulsory element at the final stage of treatment.

In a very general hypothetical form, it can be said that *Mazars* affect the deep mental layers and somehow relieve internal, often subconscious conflicts. They reconcile a person with reality and return him or her to it, renewed.

Fertility

Some 70 per cent of female respondents visit *Mazars* to solve the problem of infertility, and indeed the overwhelming majority of natural healers who treat infertility do so at *Mazars*. Among the Kyrgyz there are ancient family traditions about children and heirs, and the first-born has to appear at a strictly determined time after marriage. As a result, infertility can cause women considerable trauma, which is often exacerbated by feelings of guilt and personal inferiority. The notion that men can also be infertile was virtually non-existent in traditional Kyrgyz society. Children were the main wealth of any family, irrespective of its social status.

Turdu-apa, a 79-year-old woman, visited a *Mazar* for the first time 'fifty or fifty-five years ago'. The reason was that she had failed to become pregnant for three and a half years after her marriage. She sought help from an *Akbu-bubu* (*bubu* is a type of natural healer), who lived in the same village. The *Akbu-bubu* told her they needed to visit a *Mazar* together. Soon after visiting two large *Mazars*, Shamshykal and Zulpukor, Turdu-apa gave birth to her first son. Now she barely remembers which rituals she and her healer performed at the *Mazars*. She notes that because of her youth she had no understanding of what exactly they did, and simply tried to strictly follow what she was told to do. The Zulpukor *Mazar* is characterized by a big tomb, and the main ritual ceremony consists of walking around it three times in certain manner and with corresponding verbal accompaniment.

Infertile women primarily visit natural *Mazars*, but Turdu-apa is an example of a somewhat different category. Here the ritual of worshipping a *Mazar* tomb is clearly related to the cult of the forefathers. Such worshipping and ritual establish a kind of link between the worlds of the living and the dead, between life and death. The well-being of the living is connected to the will of the dead, and it is indeed the dead who can help produce a new life. Thus, when visiting *Mazars*, people enter into another reality, which is fundamentally different from their normal life. Something similar seems to take place at the natural *Mazars*. The main natural cycle is birth and death.

Well-being of the family and relatives

Many visitors come to sacred places with the purpose of changing their current situation, such as when the family is experiencing a period of failures and losses, or when they wish to reinforce and maintain success after the family has achieved something good.

Tuloo is a ritual of making a sacrifice that is performed at *Mazars*, and aimed at either changing or reinforcing the situation. Erlan, a 28-year-old businessman, regularly visits the Manas Ordo *Mazar*. As he says, 'Every year we come to the *Mazar* and perform *tuloo*. We slaughter a ewe or lamb asking for success in business, health in the family, prosperity and a rich harvest.' The young man understands the ancient *tuloo* ritual as making an animal sacrifice to the spirits of the forefathers. The animal must be slaughtered at a sacred place; all of the meat must be boiled completely and eaten up after prayer. Erlan believes that the more people eat it, the greater will be the effect of the ritual.

The idea of the interrelationship and mutual responsibility of the past and present, dead and alive, ancestors and descendants, and sacred and mundane underlies the ritual of tuloo. *Tuloo* is an act that connects the opposite worlds and spheres. The well-being of the living is achieved with the help of forefathers' spirits, but for that the spirits must feel the memory and respect of those who are alive. Sacred places facilitate such contact. From April to October 2004 there were 430 sacrifices made at the largest and most equipped *Mazar* of Talas Oblast, Manas Ordo.

About 20 per cent of the informants in the Talas Oblast noted that they attributed positive changes in their lives to, and achieved well-being by, visiting *Mazars*.

Internal need

Some visitors say that they come to sacred places without any specific purpose: 'Something makes me come here.' 'My legs bring me here themselves.' 'My soul feels a big relief here.' One of the visitors, N., 44 years old, noted that the *Mazar* is a gift of God to humanity. God cannot be seen, but one can see a sacred place. The guardian of Manas Ordo, Marita, 51 years old, is sure that there are concentrated forces at *Mazars* that can reveal the secrets of the universe.

Ethnic and gender aspects

Despite the diversity of people visiting *Mazars*, at least two facts must be noted. The first is in respect to ethnicity: the majority of visitors are representatives of the core nationality (that is, they are Kyrgyz). The second is in respect to gender: women visit *Mazars* much more frequently than men.

Why is it necessarily the indigenous Kyrgyz who constitute the majority of visitors to the *Mazars*? One part of the answer is quite simple: 89 per cent of the population of the *oblast* are Kyrgyz. However, there may also be other factors at play. The Kyrgyz shifted from nomadism to settlement relatively recently, at the beginning of the twentieth century. The Kyrgyz nomads carried all their essentials and valuables with them. Hence there is a unique, living tradition of epic-telling. Places cannot be carried away, but they can be discovered or given meaning along nomadic routes. To nomads, a place where they can communicate with the supreme powers, with the cosmos, becomes sacred, and plays the same social functions as the mosque or church for settled people. Perhaps this is indeed why there are more *Mazars* than settlements in Talas Oblast.

It is not a coincidence that *Mazars* have not been recognized by religious investigators. The *Mazar* worship of the Kyrgyz people is such a vernacular tradition, with diverse meanings and functions, that it is not perceived as a modern religious tendency. Visiting *Mazars* is an integral part of the traditional way of life, one of the archetypes of the Kyrgyz worldview.

Kinship ties, including contact with forefathers, have a colossal meaning for the Kyrgyz. They visit places somehow related to the ethnic, kin, family or individual memory: places where something connects in one way or another with the person as Kyrgyz, as a representative of a particular kinship group or family.

Why women? Jumadil, 50 years old, answered this question as follows. Women are keepers of family well-being (*uidun kutu*), 'therefore, her wishes and requests are more ponderable for the protectors of sacred places than the wishes and requests of men'. Other informants believe that a woman is more emotional and subtle by nature and therefore she catches the 'vibrations' of *Mazars* better. Psychiatrists practising at *Mazars* say the same thing, but in professional language: women are 'more right-brained' and this is the reason for their more frequent visits to *Mazars*.

The economic aspect

The overwhelming majority of the indigenous people in this region live in extreme poverty. *Mazar* worship is a 'handy' practice in terms of not requiring expensive trips to distant places, or sophisticated and costly rituals. Speaking pragmatically, *Mazars* are convenient to use, visible and relatively inexpensive, which is important during protracted economic crises.

Basic rules of visitation

As with many great and important things, the cult of *Mazars* is simple in both the substance and performance. There are no strict prescriptions, just a few basic provisions that are so simple and obvious that regular visitors and experts answer the question, 'What rules need to be followed when going to a sacred place?' by saying, very simply, 'Nothing special.' One has to cleanse, bake seven *lepeshkas* (that is, bread in the form of a flat round crust), take some other food, cover the head and come with pure intentions.

Professionals and amateurs

In general visitors to the *Mazars* can be divided into two types, professionals and amateurs. Professionals are those for whom visiting *Mazars* is part of a profession or vocation: healers, clairvoyants, narrators of the 'Manas' and other folk genres, and also psychotherapists. Amateurs are those for whom visiting *Mazars* is related to problem-solving.

Kyrgyzchylyk

In the past, all professionals, excluding the medical professions, came to *Mazars* in order to restore people's health or help them solve certain life problems, and later such practice became a part of their life. Such people have a gift called *kyrgyzchylyk*. In a broad sense, *kyrgyzchylyk* means a totality of traditions and customs inherent to the Kyrgyz people since the dawn of time. In relation to *Mazars*, *kyrgyzchylyk* is usually understood as a diverse spectrum of extrasensory abilities, which a person receives congenitally and which help him or her to heal and help people.

The guardian Marita says that earlier in her life she was often unwell. She began to visit *Mazars* at the age of 24 or 25, during the Soviet regime. According to an Oriental and Kyrgyz tradition, the end of a twelve-year cycle signifies a certain level of maturity, *muchol*, so at 24 or 25 Marita was coming to the end of her second life cycle. She decided on an endeavour that was prohibited at that time, because the issue of recognition and development of her healing gift, an important component of which was visiting *Mazars*, became a matter of life and death to her. She is sure that her mother became ill, and that her sister died at the age of 33, because

they could not accept the congenital *kyrgyzchylyk* as a result of the oppression of the Soviet ideology.

The typical sequence of events that leads to recognition and adoption of *kyrgyzchylyk* is a severe and long illness that medicine cannot help, even while all medical tests give results within the normal range; prophetic dreams; referral to natural healers; training at *Mazars*; and healing practice as the only way for personal cure.

Mythology and reality

Kyrgyz *Mazars* are places where mythology is alive and blossoming, where mythology and reality are interwoven so intricately that their separation becomes meaningless.

Ant *Mazars*

In Talas Oblast, infertile women visit certain *Mazars* especially often, such as Chekir Ata, Kumuru Baba and Chynar Terek. These *Mazars* are anthills set in different environments. In the world of mythology, ants are a symbol of a very different beginning (*Myths*, 1988). It is obvious to anyone looking at ants that the congregate in great numbers and have a gregarious instinct, suggesting an attachment to family. Ants are a visible symbol of fertility. People come to worship at these *Mazars* with the hope of 'becoming infected' or of picking up this ability (Figure 1). They worship at the places, some of them have children, and the myth is recreated: 'Anthills are a place where one can find a child.' Groups of women continue to worship at ant *Mazars*. If there were not significant numbers of cures for infertility taking place at ant *Mazars* (as with more general cures for malaises at *Mazars* in general), it would seem that sooner or later the belief in their curative power should have waned, and they would have become anachronisms. Indeed, this is an argument that attempts to see the vestiges of reality through the mythological layer. Ants must possess a biological mechanism or component for the creation of a highly organized and large family. Perhaps, it is the formic acid, as some Talas healers believe. Local connoisseurs believe it is more concentrated in red ants than in black ants. Thus, mythology becomes a characteristic of a given reality, an expression of its specific attributes that have not yet been described in scientific language.

Initiation at *Mazars*

Another important ritual performed at *Mazars* is initiation. At many *Mazars* of Kyrgyzstan, especially on Thursday night, one can run into people undergoing tests. The majority of these are people who take the path of clairvoyance, healing and magic. Apart from them, there is another group whose path is connected to *Mazars*. They are narrators of the 'Manas', a great Kyrgyz epic.

From 27 August to 4 September a young *manaschy* (that is, a narrator of the Manas), Ulan I., was undergoing

initiation at Manas Ordo. The young man, 21 years old, came with his family from another region, Issyk-Kul Oblast, solely to undergo initiation (Figure 2). According to the young man's story, at one of the *Mazars* of Issyk-Kul Oblast, the spirits of the forefathers told him he had to go to Talas, the motherland of the great Manas, make sacrifices for seven days, and recount the Manas from dawn to sunset. If successful, Ulan would receive a permission to become a *manaschy* and tell the epic in front of people. On the first day, Ulan told the epic for 12 hours 20 minutes (from 7.20 to 19.40). During that period the young man did not stand up or stop and eat, and almost did not drink. All that time he was sitting under a young apple tree. To his right on a piece of white fabric there were two volumes of the Koran, a *komuz* (a Kyrgyz folk musical instrument) and a *kalpak* (traditional hat). The combination of the Koran and Manas, *komuz* and *kalpak* explicitly suggests that Ulan belongs to the group of narrators who consistently combine two cultural epochs, pre-Islamic and Islamic.

Fig. 1 Chinar Terek in Talas Oblast. Infertile women often visit Ant *Mazars* as ants are symbols of fertility [left]

Fig. 2 A young *manaschy* undergoing a ritual initiation at the *mazar* in Mans Oblast [right]

The Manas narrative flowed easily and naturally from the lips of the novice narrator, just like the water running in the nearby *aryk* (an irrigation ditch). Before he came to eating the meat of the sacrificial ewe, an especially notable moment occurred when a *moldo* (Muslim priest) began to read the Koran out loud. The distance between the *manaschy* and the *moldo* was not more than five to seven metres, therefore two sacred texts began to flow next to each other, in parallel. The *moldo's* voice overrode that of the *manaschy*, who by that time had been narrating for six hours without a single break. However, this did not affect the narrator in the slightest. Without irritation, ignoring the other or stopping, he continued his endeavour. His behaviour brought peace to the listeners' souls, which had at first shuddered because of the 'clash' of voices, manners and texts. In a couple of minutes every listener started paying greater attention to the text he or she found personally more important. Thus, at the same place, simultaneously and out loud were narrated the sacred book of the Muslims, the Koran, and the sacred epic of the Kyrgyz people, the Mana, and this caused no conflict or competition. In this regard, it should be noted that one of the fundamental features of the *Mazars* is the awakening and activation of people's existential feelings. In sacred places many problems and dilemmas, so prominent in another situation, lose their acuteness and meaning.

The phenomenon of Ulan is a translation of mythology into reality. The modern Kyrgyz are aware of the legendary narrators of the past who could tell the Manas for days. However, their activity and creativity have gone into the category of mythology as something unreal; and here by the very fact of his appearance and right of initiation, which dozens of reasonable people observed, Ulan makes us understand and recognize that there is another reality. This is what Stanislav Grof called 'Beyond the mind' (Grof, 1985), and mythology is a story about this reality.

The wonderful alloy of mythology and reality helps even very rational people overcome the limitations of linear thought and extend the boundaries of reality. *Mazars* help us look beyond the mind and consciousness, into the abyss of human unconsciousness.

Worship at *Mazars* is a form of sacral behaviour, and therefore the mythological component is very strong. A lot of what people bring to and take away from the *Mazar* is in the domain of faith, wonder and hope, in interaction with the domain of the desired and imagined. Here mythology performs the role of connector; the notion that once something of wonder happened to somebody at the *Mazar*, so it could happen to the new visitor as well. Perhaps another important function of *Mazars* is in supporting the mythological component of the human soul. This, in turn, ensures the integrity of individuals, their mental health and peace of mind.

Conclusion

The ancient Kyrgyz tradition of worshipping at sacred places has not passed away and continues to play an important role in modern society, because *Mazars* continue to fulfill their primary mission; that is, they provide a place for people to be listened to, and are there for all those who need help. They are equally open to all: those who have lost hope, those who are deprived and those who are successful. They ensure the connection between different times and generations, awaken sacred feelings and help develop people's hidden abilities. The cultural mission of *Mazars* is to act as an accumulator of ethnic memory and activator of ethnic identity.

A popular Kyrgyz proverb says: the first wealth is health, the second wealth is a wife (family), and the third wealth is material well-being in the family. This proverb reflects the fundamental values that preserve meaning in any social system and religious orientation. Health, family well-being, sufficiency and success in society are all valuable and necessary conditions, and at the same time goals of any human life. The research in Talas Oblast shows that in people's consciousness *Mazars* are special energetic zones, where people make contact with supreme forces in the search for their vital conditions or attempt to reach vitally important goals.

Notes

1. An *Oblast* is an administrative-territorial unit of the Kyrgyz Republic, equivalent to a province. *Oblasts* are divided into rayons (districts).

References and further reading

Abramson, S. M. 1990. *Kyrgyz and their Ethno-Genetic and Historico-Cultural Ties*. Frunze.

Grof, S. 1985. *Beyond the Mind: Birth, Death and Transcendence in Psychotherapy*. New York, State University of New York.

Islam, Encyclopedia. 2001. Moscow.

Mamayusupov, O. S. 2003. *Issues (Problems) of Religion During the Transition*. Bishkek.

Myths of Peoples of the World. 1988. Vol. 2. Moscow. (In Russian.)

Regions of Kyrgyzstan: Talas Oblast. 2001. National Statistical Committee. Bishkek, Kyrgyz Republic. (In English.)

Session 5

Water uses in cultural landscapes

The Sacred Sites and Gathering Grounds Initiative: strategies for protecting traditional native places on federal, state and private lands

Octaviana V. Trujillo, Laura Monti and Karen Jarratt-Ziemski, Northern Arizona University, USA

Summary

Today many areas traditionally used for subsistence and those held sacred by indigenous peoples in the United States lie within the boundaries of land held under federal or state government jurisdiction and regulation, such as those within national parks and forests, and others are held by private landowners. These sites and areas are essential to the cultural survival, spiritual well-being and physical health of the twenty-three indigenous nations who know the Colorado Plateau as their homeland, as well as to indigenous communities on traditional lands throughout the world. While these lands provide ceremonial and medicinal plants, animals, spring waters, mineral paints and stones, they also allow for contact with ancestral dwelling grounds and mythic legacies. Access to such areas is theoretically guaranteed in the United States under the American Indian Religious Freedom Act (AIRFA), the American Antiquities Act (AAA), numerous treaties and the federal–tribal trust relationship which evolved as a result of the unique government-to-government relationship between tribal nations and the United States. Many of these sites, however, continue to be imperilled by urbanization, mining, agriculture, recreation and other uses.

The Sacred Sites and Gathering Grounds Initiative sought to identify successful strategies and mechanisms to protect these places and ensure access by native peoples, and to create a toolkit of knowledge to assist native communities, tribal administrators and indigenous practitioners in pursuit of this goal. The paper discusses the process that was utilized to include, ensure and protect native perspectives to drive the development of an effective toolkit, without compromising or revealing culturally sensitive information.

Introduction

Indigenous peoples occupy a uniquely autonomous legal and political status within the United States: they form sovereign nations with a status higher than state governments, but whose sovereignty is subject to legal limits from the federal government. The relationship has always been complex, with the federal government sometimes protecting the rights and interests of American Indian tribal nations from the states and private interests, and at other times choosing to ignore its fiduciary duty to those peoples who were the first inhabitants and caretakers of the land and other natural resources.

While the non-indigenous population of the nation and the country itself grew up around them, competition for use of those resources – including traditional land use areas of native peoples – increased. As the demands of non-native citizens mounted, federal policy toward American Indians changed several times over several decades, and native peoples lost more and more traditional-use lands. The result is a complicated patchwork of complex federal Indian law, federal and state agency jurisdiction, and private ownership in these areas, where unfortunately, native peoples all too often are denied access to places and use of resources which remain vital to their cultures.

These sites and areas are essential to the cultural survival, spiritual well-being and physical health of the twenty-three indigenous nations who know the Colorado Plateau as their homeland, as well as to indigenous communities on traditional lands throughout the world. While these lands provide ceremonial and medicinal plants, animals, spring waters, mineral paints and stones, they also allow for contact with ancestral dwelling grounds and mythic legacies. Access to such areas is theoretically guaranteed in the United States under the American Indian Religious Freedom Act (AIRFA), the American Antiquities Act (AAA), numerous treaties and the federal–tribal trust relationship which evolved as a result of the unique government-to-government relationship between tribal nations and the United States. However, many of these

sites continue to be imperilled by urbanization, mining, agriculture, recreation and other uses.

The purpose of the Sacred Sites and Gathering Grounds Initiative, a project produced through a grant from the Christensen Fund and implemented through the Applied Indigenous Studies (AIS) Department and Center for Sustainable Environments (CSE), was to highlight success stories where indigenous peoples utilized diverse strategies and means to achieve access to and protection of these critical sites, and to make the knowledge available to native communities, practitioners and tribal administrators in a 'toolkit' format for them to utilize in their own efforts to continue preserving off-reservation sacred sites and traditional gathering grounds. An additional primary object was to develop a curriculum for the Applied Indigenous Studies Department at Northern Arizona University (NAU) around the overall topic, which could then be made available for use in an interdisciplinary fashion through integration in existing courses university-wide.

Preparing the ground: initial research and planning

The diversity of expertise of the project team members facilitates an interdisciplinary approach to the project, which was essential in approaching the topic as the issue is a broad one which encompasses religious freedom, subsistence, cultural survival, environmental and social justice, and basic human rights. While each of the team members is experienced in tribal issues and working with tribal communities, areas of expertise vary, and include clinical expertise and public health, native foods and plants, native education and preservation of native languages, anthropology, environmental regulation, and federal Indian policy and law.

Academic expertise however offers only one piece of the framework in building a toolkit. The project team met with a small group of interested Native practitioners, tribal government administrators and staff, who were asked to identify challenging issues and needs surrounding the overall topics of access to sacred sites and traditionally used resources, and protection of those areas from destruction, desecration and culturally inappropriate use. From this 'brainstorming' session, team members researched and selected several case studies which showcased different approaches to various problems. For example, one case study involved off-reservation fishing rights, another exemplified denial of access to a sacred area surrounded by privately owned land, successful negotiation and implementation of intergovernmental agreements involving sacred areas and collection of plants, and co-management between a federal agency and tribal nation of federally held land adjacent to a tribal reservation.

Building a toolkit: framing the issues and selecting the tools

With each case study, a concise summary of the strategies and 'tools' relevant to the case was discussed. For example, a particular case such as an off-reservation fishing rights case in Wisconsin exemplified successful utilization of legal tools. In this case, Tribal Nations successfully pursued the reserved rights doctrine and other legal tools. Each piece of legislation, and particular legal precedent is explained in a short summary, followed by a case study illustrating successful use of the tool.

In addition to legal tools, tools for co-management, collaboration and consultation between tribes and other governmental agencies were included, with brief summaries of what the particular tool is, explanations of how it can be used either alone or in conjunction with other tools, and – in most instances – a case study exemplifying successful application of the tool.

Finally, the toolkit offers a section on communication and advocacy strategies. This particular section discusses how to successfully convey messages to the non-native public as well as to policy-makers and administrators in non-tribal government agencies. Effective public relations campaigns, how to 're-frame' an issue, and tools for community organizing are included in this section.

Re-examining the tools: a gathering of professionals, practitioners, and students

Once the preliminary toolkit was built, the team invited a host of tribal administrators, practitioners and interested agency personnel from federal agencies, including the National Park Service to examine, discuss and offer comments on the progress of the project in a day-long workshop. Students from classes in Applied Indigenous Studies and Political Science also attended and participated in the workshop held in the fall of 2004. Participants examined the various sections of the toolkit, and then disbursed into small groups to discuss particular cases and the issues involved, and offered suggestions for the final version of the toolkit. The workshop format proved successful for the project and the participants. Students found the workshop a valuable learning experience, and enjoyed working side-by-side with the professionals in attendance and having an opportunity to add their ideas. It provided inspiration and a unique type of learning experience for them.

Delivering the toolkit: sharing the knowledge

Using comments and suggestions from the workshop, the toolkit was revised and a final draft is currently in production. However, ideas for delivering the toolkit in

media other than print are currently under consideration, including a possible documentary-style video, and making the toolkit available in an internet-based format.

Additionally, many issues included in the toolkit as well as some of the case studies are included in a course which team members developed for the Applied Indigenous Studies Department at Northern Arizona University on the topic of Indigenous Peoples and Environmental Justice. While several courses within the university address the topics of environmental policy, the environmental movement in the United States, global environmental politics and environmental management, the course developed for AIS addresses these topics within the specific framework of how they affect indigenous peoples. Environmental justice involving indigenous peoples necessitates a broad approach to the subject, as subsistence issues, poverty, public health and spiritual health are necessarily intertwined for indigenous peoples.

The course is a comprehensive one, which is designed to be offered through a range of media, including a standard lecture/discussion format, hybrid courses involving web-based components, and opportunities to use specific sections to create short, single-credit courses.

The course syllabus was presented to an interdisciplinary faculty engaged in environmental research and teaching. Faculty offered valuable comments on the course, and overall were very supportive of the curriculum developed. The new course was subsequently presented to AIS faculty for their implementation in the academic course schedule.

Conclusion

The overall goal of our project is to develop effective and replicable methods to train indigenous peoples in gaining and protecting access to sacred sites and gathering grounds. The process of developing a toolkit, as well as course curriculum, around the topic of off-reservation sacred sites and gathering grounds was one in which the inclusion and protection of the native perspective was essential.

The Applied Indigenous Studies Department at NAU is explicitly dedicated to capacity-building and leadership training for nation-building among indigenous peoples. The Center for Sustainable Environments seeks creative solutions to environmental problems by linking the assets of biological and cultural diversity. The combined effort of these two programmes at NAU will ensure an innovative and effective approach to building strong collaborations with other agencies, institutions and communities to meet the goals of the project.

To implement this project in a sustainable manner, NAU will not only incorporate the issues related to sacred sites and gathering grounds throughout AIS and related curricula, but will communicate this approach to other universities, colleges and training centres that have a significant indigenous education effort, especially those institutions in other geographic regions of interest to the Christensen Fund. Articles and materials developed by project participants will become part of the clearing house, and will be extended to individuals and organizations seeking to improve their management or access to such sites. Changes in federal and state policies towards sacred sites will be promoted through the project, but full implementation of policy changes will take years to be fully realized. The international exchange component of the programme will help to develop enduring and valuable relationships among indigenous peoples engaged in widely differing approaches to sacred site protection across the globe, creating an exchange of ideas that is likely to bear fruit over numerous years and multiple topics. In short, the project seeks to broaden the access of tribes to professionals conversant with 'best practices' in site management and broader policy approaches, enabling indigenous communities to fully evaluate the potential range of options and then select the strategies most appropriate for them.

References and further reading

Getches, D. H., Wilkinson, C. F., and Williams Jr, R. A. 1998. Indian religion and culture. *Federal Indian Law, Cases and Materials*, 4th edn. St. Paul, MN, West Group Publishing.

Jarratt-Ziemski, K. L., Monti, L., Trujillo, O., Nabhan, G., Seibert, D. and Tso, E. 2005. *Sacred Sites and Gathering Grounds Toolkit Project*. Flagstaff, AZ, Center for Sustainable Environments.

McCleod, C. (producer and director). 2002. *In the Light of Reverence* (videorecording). Independent Television Service and Native American Public Telecommunications. Oley, PA, Bullfrog Films.

Williams, R. A., Jr. 1996. The people of the states where they are found are often their deadliest enemies: the Indian side of the story of Indian rights and federalism. *Arizona Law Review*, Vol. 38, Fall, pp. 981–97.

Wilkins, D. E. 1997. *American Indian Sovereignty and the U.S. Supreme Court: The Masking of Justice*. Austin, TX, University of Texas Press.

Wilkins, D. E. 2002. *American Indian Politics and the American Political System*. New York, Rowman and Littlefield.

Wilkins, D. E. and Lomawaima, K. T. 2001. *Uneven Ground: American Indian Sovereignty and Federal Law*. Norman, OK, University of Oklahoma Press.

Legislation

American Antiquities Act. 1906. 16 USC 431-433.

American Indian Religious Freedom Act. 1978. Public Law 95-341.

Native American Graves Protection and Repatriation Act (1990) Public Law 101-601.

National Historic Preservation Act. 1966. 16 USC 470.

Water and civilization: managing our sacred world water heritage

Fekri A. Hassan, Institute of Archaeology, University College London, UK

Deep in the silent mountains,
The springs are ceaselessly murmuring,
My heart wanders with the flying cloud,
And then it rests on a brook.

Poems of Wang Ching-Wei, translated by Seyuan Shue (1938), Allen & Unwin, London

Summary

At the heart of our human experience and at the core of any civilization is water. Today in a world ridden with conflicts and disquiet, water may be the only means by which we can gain a mutual understanding of our shared human experience and common civilization. Nowhere does the healing, rejuvenating and reinvigorating nature of water manifest itself as clearly and wholly as in sacred landscapes of mountains, rivers, springs, waterfalls, ponds and lakes. Such places are our hope for bringing humanity together to work for common goals to further intercultural understanding and to come to terms with our spirituality. Natural World Heritage Sites are internationally recognized and may thus serve as a showcase for how water is life, how we can heal the rift between nations and sects, and how we can bring about a sense of tranquillity and engender creativity.

The threat to freshwater sources is among the most serious threats to natural World Heritage Sites and to our natural resources elsewhere.
No proper management strategy of our sacred mountains or lakes is possible without protecting and valuing water as a blessed sacrament.

The sacred in context

The 'sacred' is what we hold dear; that which we venerate and hold inviolable, indefeasible (that which cannot be forfeited or done away with), sacrosanct and holy. What is sacred is what we value most and respect above all; that which gives our lives a deeper meaning and guides our lives. There has never been a human society without inviolate, sacred notions and principles. From the hand prints in a prehistoric cave to Picasso's *Guernica*, human beings have repeatedly expressed their belief in the sanctity of human life and the need to protect it and value it as one of our highest indefeasible values. Prehistoric caves are also full of the celebration of the sanctity and the sacraments of nature and life forces. World religions have enshrined the sacred and encoded the human experience of the sacred in their liturgies and sacraments.

In the course of our historical journey, religion was politicized. Religious institutions became in many parts of the world became organized institutions legitimizing monarchical regimes and serving as key ingredients in the ideology of state societies. The modern nation-state reallocated the notion of the state from God (through the king) to the people. The pluralistic modern nation-state manifestly tolerated citizens of different religions, but confined religion to individual beliefs and practices, as long as they did not interfere with the functions of the state.

The ideology of the nation-state valorized the state and the nation, but its pragmatic operations and educational institutions found it problematic to deal with issues of supreme human values and ethics. This has become apparent as a serious problem when we are faced with the impact of new technologies and scientific discoveries on issues such as cloning, euthanasia, stem-cell research, replacement of organs, birth control and abortion. In addition, it has also become clear in a global society with increasing conflicts and turmoil that no single nation-state can impose its own national ideologies and agendas. The

United Nations as an international forum of nation-states developed a bill of human rights, and has been an institution for promoting cooperation and mutual respect among nations. Faced with the ethical dilemmas facing the world today, UNESCO is an institution in a position to guide nation-states to a common understanding of human values conducive to a life of peace, prosperity and creativity.

It has been a privilege for me to work with UNESCO (the International Hydrological Programme (IHP) and UNESCO World Commission on the Ethics of Scientific Knowledge and Technology (COMEST)) on issues related to the role of ethics in resolving conflicts over freshwater resources, and to pose a cultural strategy for cooperation. When I was entrusted with producing a historical reflection on water and civilization, it became evident to me that water is one of our most cherished and sacred substances. Regardless of culture and historical circumstances, water is venerated as the holiest sacrament of all sacraments.

Scientists, policy-makers, professionals, religious leaders and lay persons will not dispute that water is life. The UNESCO Sub-Commission on the Ethics of Freshwater Use has come to regard water is an inalienable human right (Hassan, 2002; UNESCO/IHP/WWAP, 2000).

Buddhists, Brahmans, Protestants and Muslims, among others, share a belief in the purity and beneficence of water. Descending majestically from a waterfall, or bubbling up from a spring in a parched desert; flowing briskly in a mountain stream or serenely tranquil in a pond, water binds us with nature, lifts up our spirits and soothes our human suffering. In such temples of nature, we are washed clean of our petty differences and preoccupations and are brought closer to the fountain of life.

Sacred natural landscapes, as I hope to show here, are a means by which we heal the rift in our souls caused by the dualistic split between nature and culture, old and new, objective and subjective, tangible and intangible, scientific and mystical, material and spiritual. In such landscapes, we can all experience, away from the clutter of daily affairs and international disputes, the calming and invigorating force of water. As it supports and nurtures a diversity of flowers, insects, trees and birds, we come to appreciate the blessings of water.

Fig. 1 One of oldest, if not the oldest, lake in Egypt was known to ancient Egyptians as Lake Moeris, (the Great Lake), which formerly filled the deep depression of the Nile level [left]
Fig. 2 The healing, rejuvenating and reinvigorating nature of water clearly manifests itself in this ceremony in Japan [above]

We may have wandered away from nature in our race to exploit the Earth for material gains, but we cannot wander far off without losing our own sense of humanity and wellness if we end up with polluted streams, cement blocks and acid-burnt leaves. My hope is that we will realize that we must safeguard natural landscapes as the last refugees of the sacred on Earth, and that we will make it one of our main priorities to protect and manage sacred lakes, springs, rivers and waterfalls as the carriers of the human spirit and as the means for reaching for each other across the chasm of national borders, temple walls and racial blinkers.

It would be amiss not to invoke here the views of indigenous peoples who have guarded sacred landscapes as industrialization and urban development continue to rob humanity of its living space. The indigenous peoples of Australia, Africa, Native Americans, Maori, Saami and Inuit among others suffer deeply from the encroachments on their sacred sites and destruction of their habitats (Hubert, 1994). We cannot manage sacred sites as ghost landscapes.

Water in civilization

Water is our most precious resource. It has been so intimately linked to our very existence and cultural development that it has become the source of rich symbolism, rituals and religious beliefs. In ancient Egypt (3200–300 BC), a sacred water pool was an essential aspect of temples, which also featured gauges for measuring Nile flood levels. In Mohenjo-Daro and other cities of the Indus civilization (2500–1700 BC) ritual bathing areas were prominent. In other cities throughout history water played a role in palaces, gardens and public spaces as places for tranquil reflection, joyous exuberance, spiritual renewal and community celebrations. In Christianity, as in Hinduism, Buddhism and Islam, symbolic washing with water transmits purification, the washing away of sins and spiritual cleansing. It would thus be curious if many World Heritage Sites were not directly or indirectly related to water.

Water and civilization

The history of humankind is manifest in its waterworks. Between 10,000 and 5,000 years ago, rice farmers in China, growers of wheat and barley in South-West Asia, and cultivators of maize in South and Central America created a landscape of irrigation canals, drains, embankments and terraces to sustain and develop agriculture as a dominant way of life, which subsequently expanded to most of the world. The rural landscape and the urban life of the elite supported by agrarian products provide us with a world legacy of ingenious water works. In one of China's World Heritage Areas, an ancient system of dams, dykes and sluices has helped control water and irrigate the Chengdu basin of central Sichuan since the third century BC. The system included dividing and channelling the Minjiang River.

Hue, the nineteenth-century imperial city of Viet Nam, is crossed by the River of Perfumes, and is situated in a land of water, a country of mist and rice with canals and hanging gardens. Here heritage and development conjoin in a program of eco-development inspired by traditional models of irrigation and farming. Sadly, unregulated development of areas of traditional farming such as the World Heritage Ifugao rice terraces, in the Philippines, has led to a progressive disintegration of the mud-walled terraces, regarded as one of the few surviving wonders of the world. The plight of the Ifugao rice terraces highlights the complexity of managerial issues, and specifically the need to take into consideration both the regional context of sites and the socio-cultural matrix of national development, including tourism. Programmes to alleviate poverty through tourism, without appropriate regulations and strategic planning, here and in many other cases encourage people to abandon their traditional occupations for money-making enterprises. The Ifuago farmers converted their paddies to residential and marketing lots. The young are no longer interested in the arduous, low-income work of tilling the mountainside.

Another catastrophic development is the destruction of the fragile mossy forest of stunted oaks and other trees of the mountain tops by farmers seeking to grow vegetables. This practice is causing an increasing number of landslides, which destroy terraces already suffering from neglect. In the past, the mountain top was managed by an indigenous clan-system (*muyong*). In this system, small patches were owned by clans to support rice fields below. In these patches trees, animals, food and water coexisted.[1] Thus here, as in other cases, the social fabric is threaded together with the natural elements to sustain a unique cultural landscape. Management plans in such cases require a broad outlook on a national as well as a local scale, with due consideration to social mobility and economic incentives.

Farming supported opulent cities in almost all environments of the planet, bringing water, lots of water, not just to supply the basic needs of the elite inhabitants but to create a dazzling spectacle of wealth and grandeur to marvel at. Notable examples include the water gardens at Angkor in Cambodia, the Mughal gardens in India and the Sigirya in Sri Lanka, the latter with water gardens and moats displaying one of the world's most sophisticated hydraulic technologies dating to the fifth century AD.

The legacy of water gardens in China is clearly manifest in Suzhou, where four gardens were included in 1997 on the list of World Heritage Sites (*World Heritage Review*, Vol. 13, p. 6). In Japan, ponds are an integral element of palace gardens. In addition, ablution containers by the gate are an essential element of temples. Kiyomizudera ('Clear Water Temple' in Japanese), a World Heritage Site and one of the

oldest temples in Kyoto, the ancient capital, takes its name from the clear, pure waterfall that originates from an unknown source deep within Mount Otowa (Sound of the Feather Mountain).

In Spain, El Generalife, the summer palace of the Nasrid Muslim kings of Granada, stands on top of the hill of El Sol, twin to Alhambra towering over the River Darro. In this World Heritage Site, the spectacle of El Patio de la Acequia with a central channel, and countless little channels, fountains and water jets, is unforgettable. Here one must also recall the hydraulic achievements involved in such lovely gardens, which in that case included an aqueduct that brought water from the River Darro all the way to the top of the Red Hill in the thirteenth century AD. Indeed, modern water technology is indebted to the attempts to create a hydraulic legacy related to water gardens and bathing as much as it is related to the satisfaction of basic water demands.

In the Mediterranean region, cultural landscapes are infused with the legacy of such water-lifting devices as the Shaduf and the Alexandrian (Archimedean) water screw, combined with the Nabatean aqueducts and the Persian-Armenian subterranean water conduits i.e. *qanats or foggara* (Figure 3). These devices provided the basis for hydraulic engineering in Roman times, and the water mills that became the source of industrial development in Europe, such as the Derwent Valley Mills in the UK (which started in 1771). Indeed, the emergence of Europe as a world power could not be appreciated without recognition of the role of rivers in industry, trade and nation building.

Fig. 3 Foggaras (fugharas) in the middle of the barren Sahara are another example of how water is life and how a scarce resource brings people together in the community

The Loire Valley, now on the World Heritage List, is a showcase for a cultural landscape suffused with the practical utility and aesthetic enjoyment of riverine water. Its magnificent chateaux, pleasure gardens and river scenes capture the sensibility of *l'aquisité*, the term for the Renaissance concept for the enjoyment of water in all its forms. In the meantime, one may grasp the historical imprints of Roman legions, medieval monasticism, feudal castles and the temporary presence of the Royal court. In managing World Heritage Sites, this intimate link between aesthetics and hydraulics on the one hand, and the trans-cultural, universal history of water works from irrigation canals to water mills on the other, cannot be ignored or minimized. Protection, preservation, and conservation are important priorities in managing World Heritage Sites, but it is also important to reflect on the objectives that impel us to preserve and conserve such sites for future generations, and the kinds of information we need to transmit.

Managing our sacred world water heritage

Water is emerging now as one of the most important subjects for debate in ecology, global economics and intergovernmental politics, with dire prospects of conflict while promising opportunities for cooperation. World Heritage Sites are ideal locations to reveal not only the wonders of nature, but also the human genius in dealing with adversities, and the lessons of successful management and sustainable development in historical and ancient times.

Regrettably, many World Heritage Sites are threatened by noxious water pollution, destabilizing movements in water tables, or catastrophic flooding caused by changing climatic conditions. The construction of dams has also had an incalculable impact on our listed and unlisted World Heritage resources. In fact, it was the threat that building the Aswan High Dam in Egypt posed to the monuments of Nubia – Abu Simbel, Philae and hundreds of other sites – that mobilized the world community to rescue such monuments, with the help of UNESCO. The effort also led to the establishment of the UNESCO World Heritage Center and the establishment of the World Heritage List in 1972, with the aim of protecting, conserving and transmitting the outstanding cultural and natural heritage to future generations. The list includes monuments, groups of buildings, cultural and natural sites, as well as landscapes of transcultural (universal) historic, social, artistic and scientific significance.

In view of the intricacies of the link between water and both natural and cultural heritage, our view on water and

World Heritage requires reflection and strategic planning. One clear objective for reflection is the protection of World Heritage Sites from natural and human-induced water hazards. Another objective is the preservation of sites by sustaining adequate water conditions (in terms of both supply and drainage). But another key objective, which has so far been regrettably ignored, is how to deploy World Heritage Sites to further our appreciation of water as the most critical resource for future peace and prosperity, and to inform the public of the role of managing water in our human journey from the ancient past to the present.

Aboriginal water landscape and damming the sacred

One World Heritage Area provides us with a glimpse of the struggle for survival by our human ancestors before agriculture was introduced. In the Tasmanian Wilderness World Area, listed in 1982, which covers approximately 1.38 million hectares and includes four large national parks and reserves, an indigenous (aboriginal) population survived by subsisting on coastal resources and plants, supported by a network of rivers and lakes, until the presence of European settlers (mainly convicts from the United Kingdom) doomed them to virtual extinction by 1905. In addition to standard management procedures[2] the management of the Tasmanian Wilderness World Area provides a rare opportunity to inform the public and visitors of the role of water in the life of pre-agricultural peoples. Clearly this is an area where aboriginal involvement can be effective and rewarding.

The area also provides a framework for contrasting aboriginal management of water resources with what followed. This included the building of the Gordon River Dam in the 1970s, which involved the flooding of Lake Pedder to supply cheap electricity, spurring industrial growth. The construction of another dam, which would have flooded the Franklin River wilderness, was stopped by the government. However, mining and exploration in national parks has been allowed since 1989.

Polluting the sacred

Mining is one of the main threats to our world natural heritage. In one of the worst environmental disasters in Europe, a supporting wall of the reservoir containing the toxic wastes of Aznalcollar mine in Spain burst in 1998, releasing 5 million cubic metres of toxic mud and acid water into the surrounding landscape. The toxic waste entered the Agrio River, a tributary of the Guadiamar River, which feeds the swamps of the Guadalquivir, situated within Doana National Park, a World Heritage Site listed as a wetland of international importance. Long-term problems and threats include possible contamination of groundwater.

On the Newnes Plateau in the upper Blue Mountains in New South Wales, Australia[3] , the Calerence Colliery discharges 14 megalitres a day of polluted water to the Wollangambe River. The upper reaches of the river are coated in black muck, placing at risk the ecological integrity of this pristine river in the Wollemi wilderness within the World Heritage area. Also in Australia, the Jabiluka uranium mine poses a 'serious and specific danger' to the World Heritage-listed Kakadu National Park. In Canada, the Prairie Creek mine includes barrels of PCBs and cyanide which could be flushed downstream by flash floods, contaminating the watershed of the Nahanni National Park, just upstream from the Heritage Site.[4] In addition to mining, threats to aquatic World Heritage Sites also include logging and pulp and paper mills, as at Lake Baikal, where toxic effluent is pumped into the lake. Lake Baikal is the largest freshwater lake in the world. The surrounding forests and Kamchatka volcanoes provide one of the most stunning landscapes in Russia.[5] In some cases, as in Baikal, such activities are among the most politically sensitive, and progress in resolving conflicts and removing the threats of pollution is slow or non-existent.

In Tunisia, for example, the Ichkeul Lake, a haven for migrating palaearctic water birds, was under such severe threat from damaging human activities that it was placed on the list of World Heritage in Danger in 1996. Two dams built upstream have reduced the flow of freshwater, leading to a damaging increase in water salinity. Overgrazing and land clearance by 80 families living in the area, as well as fishing, logging and farming, pose additional threats. Proposed management strategies to remedy this situation include establishing a central authority to deal with the threats of human activities, the infilling of a canal that drains the marshland, increasing salinity, and the construction of a sluice to control water salinity and restrict seawater entry.[6]

Toward a management strategy

These examples are clearly a matter of concern, pointing to the conclusion that any management plan for World Heritage Sites must take into consideration pragmatic (feasible) measures to leverage political will and financial resources. It must provide alternative means of living for communities that depend on mining and milling, and for the clean-up of the threatening pollutants, as well as the reorganization of other harmful activities. A review of the impact of mining and other water-polluting activities at World Heritage Sites is needed, with specific guidelines for action, in view of the numerous cases where environmental damage has already been done or is imminent.

In partnership with other organizations such as the World Conservation Union (IUCN), the UN Foundation and the UNESCO IHP, the World Heritage Center could develop a

programme for monitoring and mitigating threats to the water resources of World Heritage Sites that are vital to the integrity of the ecosystem, biodiversity and sustainable development. The measures to be contemplated cannot be just technical. A consideration of social, economic and political variables, and efforts to implement viable measures to protect and conserve World Heritage Sites, requires an integrated management strategy. Such an integrated approach has been advocated to counteract the impact of water runoff charged with sediments and pollutants, which threatens the quality and integrity of the shallow marine and coastal ecosystem in the Great Barrier Reef World Heritage Area. Declining water quality endangers key species such as dugongs and their food source, sea grasses, and the dynamic nature of food webs. New research technologies to treat wastewater are to be linked to dealing with conflicts among stakeholders to achieve an acceptable convergent view, performance targets and evaluative measures.

The variety of World Heritage Sites including waterfalls (such as Victoria Falls 'The smoke that thunders', in Zimbabwe), subterranean caves with underground passageways, tunnels, shafts, dripstones, stalactites and stalagmites (such as Mammoth Cave National Park, Kentucky, USA), wetlands at the delta of rivers (such as Sreburna at the delta of the Danube in northern Bulgaria, fed by river and karstic water), and the areas mentioned above provide an extraordinary opportunity to inform the public and future generations of the water cycle. This would contribute to a common vision to the current problem of water scarcity and how to deal with it. We refer here to the educational activities offered by the Tongariro World Heritage Area in New Zealand.[7] Of particular interest would be the explication of the movement of water below the ground, an enigmatic subject for the general public, yet a matter of great importance in understanding ecosystems and water pollution. Along with caves such as Mammoth Cave, the Mound Springs of South Australia, which are outstanding sites of groundwater discharge at the south-western edge of the Great Artesian Basin, the world's oldest and largest groundwater system, provide educational opportunities enhancing our awareness of how nature works. This is a decisive factor in seeking public support for protecting World Heritage Sites, and is in itself an essential activity in developing an appreciation of our natural World Heritage.[8]

The Mound Springs of South Australia, yet to receive recognition as a World Heritage Area, were vitally important for the non-agricultural Australian aborigines who recognized them as sacred cultural sites. They were also critical in the European expansion into the interior of Australia, and later in the opening up of this land for pastoral use and large-scale mining. The springs are affected by mining and dams, and excessive extraction of groundwater over the last century. These factors are instructive in revealing the close link between land use and the scarcity of water resources, as well as in showing the unprecedented attack on water resources and the integrity of ecosystems by undermining their water supply over the last century. Sites with groundwater resources must include in their management measures to incorporate development of the groundwater reservoirs, the renewal rate of water supply, and the effect of intrusive activities in the 'catchment' area of the site's water resources on the sustainability and integrity of the site. The concept of zoning must thus be extended well beyond the declared boundaries of the sites, for sites with both subsurface and surface water resources. For example, in Florida, safeguarding the Everglades World Heritage Site and National Park required the acquisition (by purchase) of 40,500 hectares of land along the eastern boundary of the park. The problems of World Heritage Sites, however, are often regional. The Everglades, for example, encompass the southern end of a 150 km drainage system for central Florida, requiring coordination with other state authorities to control water quality and the timing of water delivery.

Notes

1. www.saadhu.com/sigiriya/
2. www.dpiwe.tas.gov.au/inter.nsf/
3. www.colongwilderness.org.au/bluewh.htm
4. www.cpaws.org/alerts/nahanni-202-0501-html
5. www.nna.de/baikal/baikalopad.htm
6. www.wcmc.org.uk/protected_areas/data/wh/ichkeul.htm
7. ernz.org.nz/2k/tongariro/t_water_cycle.htm
8. lwww.sea-us.org.au/roxstop97/msinfor1.htm

References and further reading

Hassan, F. 2002. Ethical and cultural incentives of water for co-operation. Selected papers of the International Conference: *From Conflict to Co-Operation in International Water Resources Management: Challenges and Opportunities.* Paris, UNESCO.

Hubert, J. 1994. Sacred beliefs and beliefs of sacredness. D.L. Carmichael, J. Hubert, B. Reeves and A. Schanche (Eds.), *Sacred Sites, Sacred Places*. London, Routledge.

Llamas, M. R., Hernández-Mora, Marttínez N. Y., Cortina, L.. 2000. El Uso Intensivo de las Aguas Subterráneas Aspectos Éticos, Tecnologicos Y Economicos, Serie A, No.5, pp. 54. (In Spanish.)

The Ethics of Freshwater Use, 2000. Report of a COMEST (UNESCO World Commission on the Ethics of Scientific Knowledge and Technology) sub-commission chaired by the Earl of Selbourne), pp. 55.

UNESCO, 1999. World Heritage Review, Vol. 13, p. 6. Paris, UNESCO.

UNESCO, IHP, WWAP, IHP-VI, 2000. Technical Documents in Hydrology; Report of the UNESCO Working Group on the Ethics of Freshwater Use, 2000, Water and Ethics.

Rivers and the Ainu people

Koichi Kaizawa, Ainu Culture Preservation Office, Japan

Introduction

Our ancestors, the Ainu people, believed that rivers brought them various goods from the ocean. Salmon and other fishes came to them along rivers from the ocean. Since rivers were the transportation routes through which boats and ships brought goods from other places to them, they believed that the river brought them the goods such as salt that were indispensable in their lives. Rivers also served as roads for our ancestors, as they used to travel along the rivers rather than through the deep forest of *akormosir*, our land of Hokkaido. In this paper, I would like to talk about two dams: the Nibutani Dam, which now stands in our area, and the Biratori Dam, which will be built in 2006 and in which I am involved with the impact assessment.

Nibutani Dam

In September 1986, the Hokkaido Development Agency began its construction of the Nibutani Dam across the *sisirmuka* (Saru River), the precious river of our region. Shigeru Kayano, who later served as the first Ainu parliamentarian, and Tadashi Kaizawa, my father, took a stand against the construction of this dam and refused to acquiesce in the expropriation of land they owned. My father died in 1992, and I carried on his will. Mr Kayano and I took the Hokkaido Expropriation Committee (the Hokkaido Development Agency) to court.

After a legal process lasting many years, the court handed down a decision in 1997, declaring illegal the government's actions in pursuing the development project. The court stated that the government should have considered whether public interests, such as the control of floods provided by the Nibutani Dam construction, should have priority over the Ainu people's rights to enjoy their culture. Instead, the government had failed to assess the effect that the construction of the Nibutani Dam would have on the local Ainu culture, and ignored values which required serious consideration. This decision is significant, in that it pointed out the illegality of construction of the dam without examining in detail its effect on Ainu culture. However, there was no recognition of rights specifically related to our being indigenous people.

Biratori Dam

Akormosir, our land of Hokkaido, on which the Ainu people's life depended, has changed over the last two hundred years, with formerly wild land now used for farms and resort areas, mountains now desolate, rivers now straightened with concrete, and dams and debris barriers that have changed the flow of rivers. Our ancestors were blessed with all the necessary goods that nature provided them. Where can we find the land that allows us to practise and preserve Ainu culture? Furthermore, the Ministry of Land, Infrastructure and Transportation of the Government of Japan (Hokkaido Development Agency) continues to implement its plan to construct another dam, the Biratori Dam, over *sisirmuka* (the Saru River).

The area where this dam is to be constructed and the surrounding area are the important areas for the preservation of Ainu culture, since it is one of the few places where nature is still conserved. The Basin Committee that is responsible for reviewing the plan had held nine meetings by April 2002. Community hearings and community meetings were also held in order to re-evaluate the river improvement plan. As a result, it was decided that the plan would be implemented and that the Biratori Dam would begin construction in 2006.

The Hokkaido Development Agency gave four principles as the goal of the Saru River Region Improvement Plan.

* The plan aims to prevent or reduce the impact of natural disasters such as floods.
* It ensures a stable flow of river water, the preservation of animal and plant life, and sufficient

supply of water for fisheries, as well as maintenance of the quality of the water.

* It preserves the natural environment around the Saru River region, which allows the preservation of the local Ainu culture.
* The plan aims to contribute to community development, which includes development of forestry, tourism based on forest resources, and the preservation of local culture.

With these four principles as the ultimate goal, the Biratori Dam is designed to serve multiple purposes: to control floods in the towns of Biratori and Monbetsu, to control and normalize the water flow, to supply water for houses and irrigation in Biratori and Monbetsu, and to feed a hydro power station to provide electricity to households.

In one of the public hearings to discuss the Saru River Water System Improvement Plan, drafted by the Saru River Basin Committee on 4 February 2002, I expressed my thoughts regarding the construction of the Biratori Dam.

At the beginning, I quoted a passage from the book *Saruunkuru Monogatari* (the story about people along the Saru River), which was written by one of our respected elders, Yuichi Kawakami:

At the end of Meiji, when the Japan–China and Japan–Russia wars ended, the Japanese Government had to pay off the military loan borrowed from the Mitsui-Mitsubishi financial group. Ainu people, at that time, were living their life without any shortage of resources from the mountains, collecting firewood in the mountains near their house and cutting trees to build their *cise* – houses – and gathering wild vegetables. The government, without letting Ainu people know of their plan, sold the mountains to Mitsui as their payment for their loan. Not only that, the forest on the other side of the Saru River became a national forest. Before that, Ainu people were free to move around anywhere in Hokkaido and lived their life as hunters. For example, each of the tributaries of the Saru River was assigned as *Ioru* (hunting ground), and Soushupetsu belonged to Apaka Ainu, Shukushupetsu belonged to Itonpiya, Yutsurupeshipe belonged to Kotarouachapo.

The area called Shukushupetsu is the very area where the Biratori Dam is to be constructed, so it will be flooded. In the Ainu language Shukushupetsu means the river that runs from east to west, and it is a 'treasure forest', with day-round sunshine, rich in animals and plants.

Fifteen years ago when the land for construction of the Biratori Dam was bought, the trees in Shukushupetsu were all cut down and the area was deserted. Now Shukushupetsu, being a treasure forest, has regained its life and its trees have grown to be about 5 metres high. It has a lot of *punkaw* (the Japanese tree lilac, *Syringa reticulate Hara*), which is used for making rafters and coffins.

In an article in the Hokkaido newspaper of 13 January 2002, the Mayor of Biratori, Zenko Nakamichi, stated, 'It is important to consider planting trees in the national forest upstream of the Saru River to restore the natural environment, but it will take some ten years to have an effect on water management.' It is said that the completion of the Biratori Dam will take at least ten years. It is a pity that the forest, which has recovered after so many years, will once again be cut down and then flooded.

It is also reported that thirteen archeological sites (seventeen as of March 2005), which provide a precious record of Japanese history, have been identified in the area. More sites could be identified with more thorough research. The water management strategy that the Ministry of Land, Infrastructure and Transportation conducts now includes 'conservation of forest'. Moreover, Hokkaido environmental legislation refers to the significance of 'archeological artefacts'. The environmental assessment done twenty years ago (in 1982) did not include these issues for assessment and simply fails to meet the present needs. I would like to see a new environmental assessment that is suited for current needs conducted in the area that will be affected by construction of the Biratori Dam.

I do not want to see the same mistakes repeated. If an environmental assessment were now to be conducted in the area that was affected by the construction of the Nibutani Dam, it would show where things went wrong, and provide a chance to make changes in the plan for the

Fig. 1 The landscapes of the Taohua village from the outside

Biratori Dam and avoid the same mistakes. It would show that excavation of archaeological sites began before the plan was approved, that *Yuoi casi* (a fort), which was some way distant from the construction site, was destroyed unnecessarily, and that *Pomoi casi*, another archaeological feature, was taken down to enable a boat hut to be built. Furthermore, the dam management office was built on a Nibutani archeological site, as if it was a symbol of domination over the Ainu culture. In order to avoid repeating these mistakes, this time the contractors should carry out test excavations during the research period. Later, any excavated artefacts should be put on public show.

We are told that the amount of incoming water and the amount of outgoing water for the Nibutani Dam is the same. We are told that the Biratori Dam will prevent the major flood that is supposed to take place once every forty years. It is hard to imagine what will happen when these dams prove unable to prevent floods, or even appear to cause them. The floods are serious because they are not natural floods but 'floods caused by failures in managing the dams'. Since the Iwachishi Dam was built, the people who live downstream from the dam have experienced floods of this nature.

In the early twentieth century, an embankment was created for the river in this region. Local people are also saying that 'in the area between the Biratori Dam construction site and the Nibutani Dam, there has only been one major flood, caused by heavy rain in the area near Nukibetsu Bridge in July 1900. However, since the embankment was completed, there has been not a major flood.' The Hokkaido Development Agency agreed that there has never been an incident where the river flooded over the embankment since the embankment was built downstream from Nibutani. I wonder why we need to build dams.

It is only natural that the volume of water will increase when you close the water-gate of a tributary to prevent counterflow from the main stream. This happens near the mouth of the river, and can be prevented if a pump is used to pump up the water. There are many examples like this all over the country.

Let's stop peeling the skin of the earth, cutting up the meat and shaving the bone of the earth. I would like to see the comparison of economic benefits over ten and fifty years of managing rivers using natural forests and managing rivers using dams. Those who work in the Development Agency are expert river engineers, and should be capable of doing it.

The best solution to the current problem is to install pumps in the flood-prone area inside the embankment, to open all seven water-gates in the Nibutani Dam, and to control water flow only at times of heavy rain. The river banks could be used for growing plants such as ditch reeds, cattails and willows, which are necessary for the preservation of the Ainu culture. The budget that has been earmarked for construction of the Biratori Dam should be used for the conservation of the forest, hiring local people for the job. Considering the fact that the Saru River is rapid-flowing and carries a lot of sand and soil, this method of management would be more effective than building dams. I sincerely hoped that Ministry of Land, Infrastructure and Transportation and the Hokkaido Development Agency will make a courageous decision to stop building the Biratori Dam, considering their mistake in having built an illegal dam, the Nibutani Dam. However, despite my wishes, the plan to build the Biratori Dam was approved and is now being implemented.

In August 2003 Typhoon Etau hit Hokkaido, and caused serious damage, with heavy rain falling in a short period of time. In the area from the Biratori Dam construction site all the way to the mouth of the river, there was no damage to the embankment. The Hokkaido Development Agency announced that there was a danger the Nibutani Dam would break, and that people living in the affected area should move to higher land. In a town near the mouth of the Saru River, the water gates to the tributaries were not closed and counterflow from the main stream flooded many houses. The local people affected by this raised the issues of management of the Nibutani Dam, and took the Hokkaido Development Agency to court. These kinds of problems are the result of having implemented plans that were drafted on paper, rather than listening to local people who have lived for some ten years in the area.

The Ainu culture preservation research

Prior to the construction of the Biratori Dam, the Hokkaido Development Agency commissioned Biratori town to conduct a three-year research programme to examine the impacts that the dam would have on the local Ainu culture in the dam construction site and its surrounding area. Biratori town organized a research team, with local Ainu people at its core. Needless to say, this was in response to the Nibutani Court decision that was mentioned earlier.

Revision of the River Act, which is the national legislation concerning the management of rivers, has also had serious effects on the procedures related to local development projects involving rivers. The new River Act includes a requirement for community participation in the planning and implementation of development projects. In addition, there are recent significant changes in the social and political environment regarding aboriginal issues, since the enactment of the Law Concerning Promotion of Ainu Culture and Dissemination and Enlightenment of Knowledge about Ainu Traditions in 1997. This research also will look at potential mitigation measures to reduce the impacts of the Biratori Dam. I hope that the government will seriously consider implementation of the measures once they are proposed.

I believe, after having seen the effects of the Nibutani Dam, that such large-scale development projects should be assessed not only before the construction, but during it and after the dam is completed and in operation, so that we can minimize the negative effects on the natural environment and the lives of the local people.

The purpose of the Ainu culture preservation research is to assess the impact that the Biratori Dam will have on the dam site and the surrounding area along the Saru River. It also considers measures to conserve Ainu culture. On 12 May 2003, Biratori town established a Committee for the Ainu Culture Preservation Research, which includes local Ainu elders, government officials and experts in related areas such as law, landscaping and anthropology. The committee was set up to supervise the Ainu culture preservation research and to make recommendations to the mayor of Biratori. The committee is composed of fifteen permanent members, and will invite advisors as needed.

The research has been carried out by the members of the Ainu Culture Preservation Research Office (ACPRO), who are twenty local residents, including myself. We set up five subgroups within the office to conduct various tasks. There is a group in charge of fieldwork, a group in charge of interviews, a group in charge of data compilation, a group that is building a model and conducting computer simulations, and a group in charge of general affairs. In 2005, we added four more subgroups to conduct additional work: library research, public relations, growing plants and cooking Ainu traditional food. Local people were hired on a full-time base to take up these jobs. Among those who applied for the jobs, twenty people were selected for their understanding of Ainu culture and their interest in it. About half the workers are of Ainu descent.

The Ainu cultural preservation research has numerous unique features. First, this is the one of the few cases of social impact assessment that have been conducted in Japan. Moreover, it is the very first case that has a focus on the impact on aboriginal culture. Second, this research was planned and conducted with the full participation of the community, the first such attempt in Japan. As mentioned earlier, some members of the committee are local Ainu, and all the fieldworkers are local residents, allowing the impact assessment to be done from the viewpoint of local people. Most past research was conducted by experts who were outsiders. In the past, Biratori attracted many researchers who came from outside the community, and the local people acted as informants. There were clear divisions between those who conducted the research and those who were the subjects of the research. In the Ainu culture preservation research, the research structure has been changed. It is significant that a new relationship between researchers and researched is realized in this research, and those who have inherited the Ainu culture are the ones who are engaged in the research activities.

It is difficult to geographically limit the area of research in dealing with culture, since culture does not reside only in one area but extends through personal networks. Therefore, the research area in this context refers to the area in which research is most intensely conducted, but it does not exclude extension through people outside the core area. Having said this, the Ainu culture preservation research has been conducted on the Biratori Dam construction site, its surrounding area and the rest of the area along the Saru River.

Sub-research groups in the ACPRO frequently exchange data among themselves in order to examine their work and the subject of Ainu culture, which is a lively part of the local people's lives. We are committed to considering ways in which we can minimize the negative effect that construction of the Biratori Dam will have on Ainu culture and its preservation.

Ainu culture preservation research : mid-term report of 2004

There are Ainu people who go to places such as *kamuywakka* and *cinomisir*, the area where Shukutsupetsu River and Nukabira River meet on the banks of Shukushupetsu Bridge, to give prayers. These are the places where the natural conditions and environment are sufficient for spiritual enhancement. It is important to respect the effect on the spirituality of those people.

There will be various effects on the preservation of Ainu traditional clothing, food and houses. Some will be lost under the lake of the Biratori Dam and others will be lost because of the changes in the environment. The Nukabira River region used be an active hunting and gathering ground. Today, when people are able to drive long distances, this area is used for sports fishing, picking wild vegetables and other activities, and it attracts a lot of people who enjoy mountains and rivers. When the Ainu culture preservation efforts become more intense, there will be higher demand for this as an area where raw materials for practising and preserving the Ainu culture are available.

ACPRO is currently testing the possibility of cultivating Ainu traditional vegetables and trees. It will take another ten years to see the results. To secure the resources, it is crucial to preserve a good natural environment and conditions.

It has been nine years since the Nibitani Dam began its operation. We feel it is important to assess the effects of the Nibutani Dam in the area across the Saru River, to examine the condition of rivers and the landscape, and to assess the effect on animals and plants as well as the lives of local people. We would like local people to know about the Nibitani Dam and Biratori Dam, and also to make use of our research results.

Observing the effects of the Nibutani Dam, we can detect the lowering of riverbeds, ecological changes and

environmental changes. The mid-term report concludes that we need to continue to assess the environmental and social effects, and to implement appropriate countermeasures in order to operate the dam while respecting local peoples' voice and local culture, and conserving the natural environment.

I was born in Nibutani and grew up watching *sisirmuka* (Saru River) every day for more than a quarter of a century. When I was young, I got together with friends and went swimming in the Saru River. When we got tired, we rested by a fire on the river bank. When we got hungry, we went into the river and caught bullhead, loach and river shrimp, grilled them on a fire, and swam until it was dark. To get to the other side of the river to help with the farming, we used *cip* (a boat) or a house wagon. In the fall, several house wagons went across the river to bring back the harvest. Around that time, children gathered around trees near river bank to gather *kokuwa* (*Actinidia arguta*) and mountain grapes, as they are sweeter than those of other trees. In winter, there were many house sleds carrying wood for stoves from the other side of the river, travelling on the frozen Saru River. These are the scenes of the past in Nibutani.

Now, we see that the Saru River does not freeze in winter, fish cannot swim into tributaries because of the lowering of river beds, slanted bridges and other constructions. If we must have dams, if we must have river improvements, we can live with them. Just stop and think that we are changing the ecological balance in the Saru River.

The same applies to Shiretoko, which now aims to become a World Heritage Site. So far, the Ainu people have not been welcome to get involved in the planning, management and running phases of it. But in this area, owls, bears and foxes are free to get salmon and trout in some rivers, where weirs were taken out of the rivers so the salmon and trout could swim up them. We, the Ainu, have to turn in some ten pages of documents to get permission to catch salmon for use in our ceremonies. Of all the indigenous peoples in the world, is there another group like us who cannot freely harvest our precious food?

Our ancestors believed that *nokapira* (the Nukabira River) was the main stream of *sisirmuka* (Saru River), while we now believe it is one of the tributaries of *sisirmuka*. The reason our ancestors believed that is that the Nokapitapetsu originates in Mother *porsir* (Poroshiri Mountain), which is the highest mountain in the Hidaka Mountain Range. Sisirmuka extending over Poroshiri is a scenically, culturally and historically sacred river which deserves to be a World Heritage Site.

Acknowledgement

This paper was translated by Masami Iwasaki-Goodman, Hokkai Gakuen University.

Fig. 2 The Taohua village from the inside

Sociocultural importance of wetlands in northern Australia

Bas Verschuuren, Wageningen University and Research Centre, Netherlands

We want Goose, we want fish.
Otherman want money.
Him can make million dollars,
But only last one year.
Next year him want another million.
Forever and ever him make million dollars …
Him die.
Million no good for us.
We need this earth to live because …
We'll be dead,
We'll become earth.
This ground this earth …
Like mother and brother.
Trees and eagle …
You know eagle?
He can listen.
Eagle our brother,
Like Dingo our brother.
We like this earth to stay,
Because he was staying for ever and ever.
We don't want to loose him.
We say 'sacred leave him'.

Bill Neidjie with S. Davis and A. Fox

Summary

Although wetlands provide many goods and services to people, ecological, economic and sociocultural, they are often undervalued. In particular, the sociocultural importance of wetlands is often ignored and difficult to capture with traditional economic valuation methods. There currently exists no framework to assess and value the social and cultural importance of wetlands. Although sacred sites, land rights and native title based on spiritual relationship to land are legally recognized, water however is not.

A typology of sociocultural functions and values has been created in order to assess the sociocultural importance of wetlands in northern Australia. The typology includes tangibles as well as intangibles: human health, cultural heritage, spiritual and existence value, inspiration and expression, knowledge, sense of place, aesthetic quality, tourism and recreation, and peace and reconciliation. Indicators have been selected for these sociocultural values and scores have been attributed to them on the basis of interviews and best professional judgment. Scores have been attributed for different stakeholders such as Aboriginal people, fishers, pastoralists and tourists, who make different uses of water and hold different sociocultural values related to water and land.

Remaining challenges include the selection of appropriate indicators and valuation processes; the need for the application of appropriate guidelines and methodologies to assess the sociocultural importance of wetlands; setting in place management methods and policy instruments that facilitate integration of sociocultural importance; and facilitating equitable trade-offs and compensation mechanisms between intangible values and development, conservation and poverty alleviation.

Introduction

This article draws from research experiences gathered from coastal floodplains and wetlands: the Mary River catchment in the Northern Territory (NT) of Australia; the Daly River catchment; and the wetlands surrounding the Kunbarllanjnja community situated in Western Arnhem Land. The later borders the East Alligator River and neighbours Kakadu National Park, which is listed as an UNESCO World Heritage Site for its cultural and natural values. With the exemption of the Mary River, the wetlands in the region are Australia's largest seasonal wetlands currently unaffected by river regulation or other substantial structural or hydrological modification (Finlayson et al., 1988). The wetlands of the NT and northern Australia at large are essential to the maintenance of viable populations of many aquatic flora and fauna species like lilies, pandanus, birds, fish and reptiles. These play an important role in the nutrition and culture of the Aboriginal peoples and sustain important recreational fisheries and tourism.

As these unique tropical rivers, floodplains, wetlands and estuaries have remained relatively undeveloped compared with those of other regions in Australia, there is now increased interest in finding opportunities to productively develop their land and water resources. Under the increasing development pressure, care needs to be taken to protect downstream users and wetlands of high conservation value (Land & Water Australia, 2004). These wetlands have, in a number of cases, become icons in the 'Northern Territory experience'. Some are registered Ramsar sites while others are registered for their national significance (PWCNT, 2000).

There is a need for effective management initiatives to be employed by decision-makers and land managers alike to protect the values of these rich wetland ecosystems. In the Northern Territory, this means that decision-making in relation to development and planning of water resources should be supported by a comprehensive multi-sectoral approach (Land & Water Australia, 2004).

Multi-sectoral and integrated catchment management approaches for the planning of land, water and natural resources have proven effective in other parts of Australia. The Northern Territory however is characterized by a number of unique conditions such as remoteness and low population density. Elsewhere in Australia these and other factors have contributed to a broad array of community-based management structures such as Landcare, Coastcare and Waterwatch, but there are also distinct opportunities for Aboriginal people. The successful and rapidly growing 'Caring for Country' movement is effectively revitalizing the traditional relationship between the cultural values and land management strategies of Aboriginal people on Aboriginal-owned lands. This includes increasing possibilities for the participation of Aboriginal people in wetland management (Storrs et al., 2001). However, these developments are not sufficient. It is recognized that in many cases community knowledge remains largely untapped, while traditional knowledge held by indigenous communities is still being lost. Once this knowledge is lost it will be lost forever.

Including the cultural values of natural resources in planning and management has posed the need for the retooling and creation of innovative assessment approaches that ultimately support sustainable development through equitable decision-making. For example, regarding the planning of proposed water reallocation plans in the NT, there does not seem to be an adequate government mechanism or procedure in place to take into account the cultural importance that the Aboriginal people attach to water. This is remarkable considering the fact that 43.9 per cent of NT land is under Aboriginal title. However these cultural values of water are increasingly recognized as playing an important role in sustainable planning of water, wetlands and the coastal zone. In southern Australia integrated river basin management of the Murray-Darling system has led to the development of what is called cultural flow. Cultural flow is not merely the quantification of the amount of water needed to satisfy 'cultural' demands: it extends to a working relationship between Aboriginal people, communities and the management of the river system.

Various stakeholders in the NT have expressed their desires to see more open and participatory forms of planning, and ultimately guidelines for the incorporation of sociocultural values and related environmental functions in these planning processes (like the concept of cultural flow). Overall it has been recognized that this is an important factor to gain cooperation from local and indigenous

Fig. 1 A view over the wetlands and floodplains at Kunbarllanjnja community seen from Injalak Hill. During the wet season the land is covered under an extensive sheet of water, cumulating as precipitation reaches a total of 3,000 mm to 4,000 mm (from around November till April).

communities. Moreover, conservation and natural resource management programmes are likely to have only limited success without the support of local communities (Land & Water Australia, 2004). Including sociocultural values in the assessment and planning process can help to exclude non-sustainable development decisions. Obstacles such as vested competing interests can also be transcended, and ideally inappropriate or incomprehensive management and policy actions can be identified.

The full value of wetlands

Wetland ecosystems provide many diverse resources and services and are of critical ecological and sociocultural importance to human well-being. As one of the earth's most productive ecosystems, wetlands directly and indirectly support millions of people in providing goods (such as food and raw materials) and services (such as flood control, water filtration, aesthetic beauty and recreational benefits) (Stuip et al., 2002). The Millennium Ecosystem Assessment (MEA) estimates 7 per cent of the earths surface to be wetlands, delivering 45 per cent of the world's natural productivity and ecosystem services, of which the benefits are estimated at US$15 trillion a year.

Despite these benefits, the 'full value' of ecosystem functions is often ignored in policy-making, environmental management plans and corporate evaluations of development projects. As a result of the failure to fully account for ecosystem values, 50 per cent of the earth's wetlands are already estimated to have disappeared. Hence, uninformed decision-making often leads to unnecessary ecological damage, social problems and a waste of financial resources, which is now belatedly recognized through analysis of expensive wetland restoration actions. To ensure proper decision-making regarding the conservation and sustainable use of ecosystems, further and improved information is needed on the functions and the full ecological, sociocultural and economic value of the goods and services ecosystems provide (Costanza et al, 1997; de Groot et al, 2003). Increasingly, scientific studies are showing that multi-functional sustainable use of ecosystems is, in most cases, economically more beneficial than non-sustainable, single-purpose use, if all functions are properly accounted for (Balmford et al., 2002; Millennium Ecosystem Assessment, 2003).

Wetlands and water play a key role in many ecosystem services that contribute significantly to human well-being. Likewise, people make diverse use of water and hold different social and cultural values related to water and wetlands. In order to assess the sociocultural importance of wetlands these values need to be identified and categorized in a comprehensive manner. One approach for achieving this is by using an analysis of wetland functions, goods and services. Following the ecosystem services classification of the recent UN Millennium Ecosystem Assessment, an analysis is made of the supporting, provisioning and regulating services and 'cultural services' (non-material benefits) obtained from ecosystems. A similar classification is used by the Ramsar Convention's Scientific and Technical Review Panel (STRP) in refining technical guidance for valuing wetland goods and services (deGroot and Stuip, 2005). Furthermore, the Ramsar bureau recognizes the importance of cultural aspects of wetlands through resolution VIII.19 (COP8 DOC15) which provides a classification of non-material values that can serve as basis for assessment of cultural values.

The sociocultural importance attached to wetlands is strongly related to a cluster of intangible values. In most classifications of ecosystem functions, goods and services, this cluster of intangible values is covered by the terms 'cultural and amenity', 'sociocultural' or 'information' functions (De Groot, 2002; MEA, 2005). Most classifications encompass the following more or less similar or overlapping intangible human ecosystem relations: human health, cultural heritage, spirituality, aesthetics, existence, recreation and tourism, inspiration and expression, knowledge, sense of place, peace and reconciliation. For an explanation of these categories see the typology of sociocultural functions and values in Table 1. Being largely within the domain of the World Conservation Union (IUCN)-World Commission on Protected Areas (WCPA) Task Force on Cultural and Spiritua Values of Protected Areas (CSVPA), the work accomplished by the taskforce has been very helpful, acting as guidance for compiling a typology of sociocultural or intangible values and assessing the sociocultural importance of wetlands in the NT. However, when creating such a typology one has to accept that definitions of classification categories overlap. According to Harmon (2003), there is no particular reason to artificially attempt to eliminate this overlap because the definitions are all used at various times by different technical or academic disciplines. Hence, overlap needs to be dealt with according to the purpose of the assessment and the most appropriate valuation methods.

Sociocultural functions and values	Short description	Indicators and measurement units
Importance to human health	Importance to human health Therapeutic effects of nature on human psyche, and physical health effects of the relationship between people and natural environments, which create the potential for healing and enhancing physical and psychological well-being	• Suitability and capacity of the natural system to provide health services. • Restorative and regenerative effects on people, such as decreased levels of stress and mental fatigue. • Decreased need for healthcare services and medication. • Socioeconomic benefits from reduced healthcare costs.
Cultural heritage	All the qualities, traditions or features of life that have been continued over many years and passed on from one generation to another, especially ones that are of historical importance or that have had a strong influence on society	• Historic sites and features. • Role in cultural landscapes. • Cultural traditions. • Culturally significant species. • UNESCO World Heritage Sites, Biosphere Reserves, Belvedere listings, NHT (Natural Heritage Trust - Australia) listing, etc.
Spiritual	Sacred, religious or other forms of spiritual inspiration derived from ecosystems. Importance of nature in symbols and elements with sacred and religious significance. Qualities of nature that inspire humans to relate with reverence to the sacredness of the site.	• Presence of sacred sites or features/SNS. • Role of nature in religious ceremonies and sacred texts. • Oral tradition, song, chant and stories. • Totemic species, customary use of flora and fauna. • Traditional healing systems.
Existence	Importance people attach to nature for ethical reasons (intrinsic value) and intergenerational equity (bequest value). The satisfaction, symbolic importance, derived from knowing that outstanding natural and cultural landscapes have been protected and exist.	• Expressed preference for nature protection and conservation (e.g. through donations, voluntary work). • Willingness to pay. • Donations and contributions to nature conservation organizations.
Recreation and tourism	Variety in landscapes with (potentially) recreational uses including natural and cultural heritage. Increased health and well-being due to the restorative effects of experiences with nature and vegetation.	• Capacity to provide for eco-tourism, (recreational) nature study, cultural tourism, resource-based tourism (fishing, hunting). • Presence of scenic routes, recreational facilities, tour operators, guides etc.
Inspiration and expression	Ecosystems provide a rich source of inspiration for art, national symbols, architecture and advertising.	• Use of nature as motif in books, film, painting, music, folklore, national symbols, flagship species, architecture, advertising, etc.
Knowledge	All forms of knowledge and information derived from or based on ecosystems through science or traditional means	• Traditional knowledge systems (TEK, traditional law, traditional healing systems etc.).

		• School excursions. • Scientific research. • Eco-tourism/nature education. • Benchmarking (for food control or vulnerability to climate change, food security etc.) . • Monitoring (related to water watch, land care, coast care, bush care etc.).
Sense of place	People value the sense of place that is associated with recognized features of their environment, including aspects of the ecosystem	• Historical heritage NHT listed. • Story lines and sacred sites. • Sense of place studies. • Cohesion of family, social or cultural groups (skin-names). • Language and linguistic diversity. Caring for country.
Aesthetic	Preference for nature and natural elements related to the beauty of nature	• Preference for wilderness over cultivated landscapes. • Presence of scenic drives and routes. • Increased value of property in natural settings.
Peace and reconciliation	Fostering regional peace and stability through cooperative management across (international) land or sea boundaries, or as cultural spaces for the development of understanding between traditional and modern societies or distinct cultures	• Border-crossing resource-sharing. • Reconciliation between cultures. • Increased social integration. • Joint or co-management. • Leases of land and minerals. • Equitable intellectual property sharing.

Sociocultural valuation

What can be valued and how can this value be expressed and communicated? Table 1 provides a non-exhaustive overview of indicators and measurement units related to sociocultural functions and values. The values of sociocultural functions, especially the intangible functions, are generally hard to communicate to decision-makers. These values are poorly covered by economic or conventional valuation tools, partly because they lack clearly or objectively quantifiable indicators. There are several reasons for this. First, valuing intangibles is based on an intercultural process which evolves between different knowledge and belief systems. Second, there is no comprehensive framework or valuation methodology for decision-makers dealing with intangible values.

However, it is clear that some of these human ecosystem relations like tourism or aesthetics can be addressed by economic valuation tools (such as using respectively indicators such as existence value and the increased value of property in a natural setting). Translated into dollar value this is a poor reflection, an approximation (but nonetheless useful in some cases) that does not adequately represent the 'full value' of the human–ecosystem relation. More clearly, sociocultural functions and values have been found to relate to use as well as non-use values of wetland goods and services. Where use values are concerned, the monetary value of goods and services in terms of market price might resemble or contest the value of the sociocultural service. For example, the value of paperbark trees (*Melaleuca quinquenervia*) might be estimated indirectly through the market price of Aboriginal people's artwork for which their bark is used as a natural canvas. However, the spiritual and inspirational value of the artist put into the painting has different dimensions, which often relate to aesthetic value and sense of place. Sense of place and the interaction with the trees are also conserved in language. In the Wagiman language which is one of the ten languages in the Daly River catchment, still spoken fluently by approximately ten people, a place with a lot of paperbark is named specifically

Table 1. Typology of sociocultural values

Sources: adapted from English and Lee (2003), de Groot et al. (2003), Harmon and Putney (2003), MEA (2003), Shultis (2003).

'wunybuwunybu', signifying the importance of the wetland-related paperbark to Aboriginal people.

To return to the applicability of economic valuation which is often proposed as a primary valuation tool, we must take some considerations into account prior to the valuation. As is often the case when using economic valuation tools in larger assessments, their uncertainties accumulate into the total value. This creates uncertainties regarding their accuracy, which might cause people to condemn the assessment as a whole. Moreover economic valuation as such does not consider how people or individuals respond to resource allocations, and does not regard the longer-term allocation of resources. Methods of economic valuation are static and ignore all non-linear interactions and complexities such as ecological thresholds, socio-dynamics and irreversibility. It is therefore important to understand the limitations, caveats and pitfalls of economic valuation, because when methods are inappropriate or flawed they are worse than useless; they perpetuate misunderstanding of the concept of value (Pagiola et al., 2004). Klaus Töpfer expressed it as follows: 'The value of ecosystems, landscapes, animals and plants cannot adequately be measured statistically or in merely financial terms as the values of biological, cultural and linguistic diversity are intimate to life in its entirety.' A solution can be to broaden valuation techniques to include sociocultural and ecological aspects and balance them equally with economical aspects. When formalized, this method could become something like a decision support system. However it is clear that numerous obstacles regarding indicators, scale and the nature of value have to be overcome before any reliable system can be developed.

Nonetheless, an attempt has been made by the author to put a numerical value on the indicators provided in Table 1. For each indicator four values were attributed, corresponding with the main stakeholders utilizing the wetlands: fishers, tourists, landowners (mainly pastoralists and agriculturalists) and Aboriginal people. The numerical value was based on best professional judgement derived from around 60 interviews with local people, tourists, fishers, Aboriginal people, government officials, park staff and representatives of relevant institutions. The approach in itself is interesting; it becomes possible to graphically display, for example, the importance these stakeholders attribute to traditional or local knowledge in one of the three wetlands. However as the analysis took place it was realized that much more in-depth and lengthier research would be needed to determine more specific indicators and to come to a display of information useful for equitable decision-making. Nonetheless, general conclusions and lessons learnt from this valuation are particularly useful to illustrate this article. In addition to the applied methodology, alternative methods can be recommended such as multi-criteria analysis, judgement (personal and group), expert opinion (jurors, referees) and participatory rural appraisal.

The perception of value

To be able to account for the sociocultural importance of wetlands we need to understand their desirability and usefulness in relation to human well-being. If it is recognized that different types of spiritual, intellectual and physical links between human cultures and ecosystems are inseparable, the different dimensions of the human–ecosystem relationship become apparent (MEA, 2003). Moreover, cultural dimensions are often diverse; for indigenous and traditional peoples, community, culture, spirituality, nature and territory are an indivisible whole (Posey, 1999). This illustrates one of the challenges when assessing the sociocultural importance of wetlands using an ecosystem function approach. Sociocultural values can be assigned to almost every single function the ecosystem performs because human well-being is inextricably linked not only to goods and services provided by ecosystems, but more so to the functioning of the ecosystem as an indivisible whole.

Clearly, one wetland can be of significance to various groups of people and hence support a myriad of distinct and possibly even conflicting sociocultural values. However, an analysis of wetland functions, goods and services is particularly useful to show that sociocultural importance does not relate through a one-to-one relationship with cultural services, but may also be attributed for example to production or regulation functions. This can be explained by the fact that many wetland goods and services are known to be of economic value as well as being of significant sociocultural importance. For example, fish in wetlands can provide a basis for substantial indigenous, commercial and recreational fishing potential, but the same fish can also be important as a sacred, totemic or iconic species. This is illustrated by a comment of an Aboriginal woman about recreational fishers anchoring at sacred sites in the Daly River: 'We are talking about water, but these people are sitting on my ancestors under the river, that river is really alive.'

Furthermore, fish can be of considerable importance to science for monitoring and benchmarking of water quality. From this we can conclude that fish support tangible (production) functions, such as food provision, and intangible functions, such as knowledge generation and spiritual well-being. Moreover these differential values have at times steered the debate on resource rights and access to the resource, inviting the NT government to use fishing as a political leverage (Palmer, 2004).

As is often said; 'The way we categorize things limits the way we perceive things.' This is well illustrated using a fisheries-related example derived from NT coastal wetlands. In many coastal communities all around the world cultural

traditions have developed in synergy with the coastal zone as a form of co-evolution, and are therefore important in stabilizing the social and institutional structures that underlie cooperative fishing activities (Pomeroy and Berkes, 1997). In the NT these social and institutional structures are poorly developed between stakeholders, who are ignorant of each other, as a result of underlying contested cultural and social values.

In this case, cultural values encapsulated in dreamtime stories have been passed on over generations through, dance, song, art and ceremony. These dreaming tracks link social groups and geographical areas (Jackson, 2004; Memmot et al., 2004). Recorded examples of dreaming tracks in coastal areas, such as in the Gulf of Carpentaria, even include cases where ancestral beings, such as the dingo, rainbow serpent and dugong, are passing through areas that are now sea. Similar developments have been described along the floodplains in the Alligator River region in the vicinity of Kunbarllanjnja. In this case story lines describing the dreaming tracks of the ancestral beings have been preserved at least since the physical creation of wetlands inundated the land (Chaloupka, 1993).

Because Aboriginal people do not distinguish between land and water, they see any claim on the sea within their traditional responsibilities as justifiable, disregarding the fact that Aboriginal freehold title by law includes land and does not extend to water, the sea or the fish in it. As a result of disputes over ownership of the coastal zone and the sea, coastal policy has not yet effectively developed. Despite the fact that Aboriginal people are legally excluded from commercial fisheries other than for self-subsistence, Aboriginal claims of the sea are poorly understood by professional and recreational fishers. Alternatively, to protect sacred dreaming sites Aboriginal people call upon the Sacred Sites Act, after which (in most cases) these areas become off limits for non-Aboriginal people, including commercial and recreational fishers, who feel excluded from what they regard to be a common resource.

Both the contested claims on ownership and the protection of sacred sites have resulted in court cases, giving little space for reconciliation among the parties involved. This

Fig. 2 Barramundi (*Lates calcarifer*) rock painting at Injalak Hill Kunbarllanjnja communities primary art site. The style of painting where the inside of the animal is visible is called 'X-ray'. It is part of the world's oldest continuous painting tradition which confirms the living spiritual relationship of Aboriginal people and the wetlands that form their environment. Photo by Bas Verschuuren 2004.

also shows that cultural values need to be supported by a rights-based approach, because they are very likely to be outweighed by the economical value of production functions. Functional legal arrangements have led to co-management agreements and the granting of customary or user rights. Specifically in cases where land claims were considered to result in lengthy and expensive court cases, this has often been used as a means to reach an effective compromise. Co-management arrangements are in this respect a good example of empowering local people through conserving cultural diversity, which in its turn naturally contributes to the maintenance of biodiversity.

Need for reconciling planning processes

According to deGroot and Ramakrishnan (2005), cultural services are tightly bound to human values and behaviour, as well as to human institutions and patterns of social, economic and political organization. Often trade-offs have to be made when material capital is accumulated at the expense of environmental security or sociocultural values (as illustrated by the poem in the beginning of this chapter). Because of their important role, cultural services are in need of conservation and in most cases protection; once gone, they cannot be replaced. In the light of these conservation requirements it may be expected from development projects that they incorporate best practice and management styles. It may be argued that governments should stimulate the development of such measures, including the implementation of guidelines such as the Akwe:Kon voluntary guidelines of the CBD[1] which propose a stepwise approach towards adaptation of the relevant processes in the government and private sectors.

In the face of regional development, assessment methodologies need to be scaled up from a local to a regional level, which has posed the need for retooling and innovative approaches. This is especially true when taking into account that conventional top-down chains of management and policy need to become able to be influenced by outcomes of participatory processes and transparent working methods. Obstacles such as vested competing interests, conflicts and inappropriate or incompatible management and policy need to be put on the table and re-examined in order to incorporate a participatory stakeholder-based approach.

Perceptions of cultural services are more likely to differ among individuals and communities than, say, perceptions of the importance of food production. Moreover, the assessment and valuation of sociocultural services should result in clarifying trade-offs based on competing interests in the light of human well-being. Equitable decision-making itself is a social choice, but can only be reached when all stakeholders have been involved in the assessment process. This includes empowering people and communities to participate adequately in the relevant development processes. Often the contrary is true, as is expressed in a social study undertaken in the Alligator River region: 'social problems are seen as a manifestation of a lack of real control and the absence of any sense of real control among local people. The smothering of Aboriginal values and priorities by overlying non-Aboriginal structures generates a sense of inadequacy and powerlessness.'

To learn from such experiences it is of the utmost importance to communicate with the people appointed by the community. Doing so often requires preparations: giving public notice, gaining access to land and getting people organized. Because this can be a lengthy process, the Aboriginal people of the Daily River saw themselves confronted with the impossible when they saw the time schedule prepared by the Community Reference Group that had been established on the behalf of a water reallocation project. The schedule did not permit them to adequately relay the community's views and concerns regarding water, which caused the Aboriginal people to withdraw from the planning process. However, there is potential for an increasing role for cultural values in wetland management. But first there needs to be agreement on which values are important and how these values will be assessed and communicated.

In reality, sociocultural values are too often used as a vehicle for strengthening decision-making rather than being the decisive (objective) source, which is often based on more easily assessable market-based arguments. Because of the differences in the numeric nature of expressing market-based values and sociocultural values, sociocultural values can be a merit or a burden depending on how respective actors in a debate wish to support their case. Coming to terms with valuation methods, for 'making the priceless count', is probably the most challenging aspect of valuation. If a value assessment framework was developed that worked as a sort of 'easy packaging' with ready-made questions, tasks and boxes to tick off, it might be a tool that would meet the demands of managers and policy-makers, but it surely would not do justice to the actors in question and the discipline of social sciences as such. However care needs to be taken regarding the approach to assessment, according to an NT government official:

'One culture is dominating the other and telling others what is or isn't important: I certainly don't see us being in a box or framework and Aboriginal people coming up to us and saying 'Well this is the most important set of values and you fit here within that framework.' … No one conceives of that at all'.

Despite difficulties, the need exists for the NT government to make explicit the linkages that people have with country and natural resources to further enhance planning. Social

relations and structures are now receiving increased attention in bringing about catchment-area wide change in land use policy and practice (Jackson, 2004). Most of the problems are perceived when people's values are inadequately interpreted or defined. According to English (2000), the fact of defining intangible values is not itself culturally neutral: it comes from the western scientific tradition. But if we do not define intangible values in some way it will be virtually impossible for them to influence management. Moreover, it has become very clear, according to Max Finlayson, that with a changing attitude towards the growing importance of the role of cultural values in the decision-making process, there is a need to move from traditional biophysical sciences towards social sciences and the integration of the two.

Fig. 3 *Corroboree*: a ceremonial link of spiritual and communal life with landscape and nature through dance and song

Note

1. Akwe:Kon Voluntary guidelines of the Convention on Biological Diversity (CBD) for the conduct of cultural, environmental and social impact assessments regarding developments proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities (2004).

References and further reading

Balmford, A., Bruner, A., Cooper, P., Costanza, R., Farber, S., Green, Rhys E., Jenkins, M. 2002. Economic reasons for conserving wild nature. *Science*, Vol. 296, pp. 950–53.

Chaloupka, G. 1993. *Journey in Time: The World's Longest Continuing Art Tradition*. Sydney, Australia, Reed.

Collins, B. 2000. *Kakadu Region Social Impact Study Community Report 1998–2000*. KRSIS Implementation Team.

Costanza, R., D'arge, R., de Groot, R., Farber, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O'Neill, R.V., Paruelo, J., Raskin, R., Sutton, P. & van den Belt, M. 1997. The value of the world's ecosystem services and natural capital. Nature, May, Vol. 387, pp. 253–60.

De Groot, R.S., van der Perk, J.P., Chiesura, A., van Vliet, A.J.H. 2003. Importance and Threats as Determining factors for Criticality of Natural Capital. *Ecological Economics*, Vol. 44, Nos. 2–3, pp. 187–204 (March 2003).

De Groot, R. S. and Ramakrishnan, P. S. 2005. *Millennium Ecosystem Assessment, Condition and Trends Assessment*. Chapter 18. Cultural and Amenity Services.

De Groot, R. S. and Stuip, M. 2005. *Guidelines for Valuing Wetland Goods and Services, Technical Report for Ramsar STRP Task 1.4 iii.* (Unpublished, draft version.)

English, A. 2000. An emu in the hole: exploring the link between biodiversity and Aboriginal cultural heritage in New South Wales, Parks, Non-material Values of Protected Areas.

English, A. and Lee, E. 2003. Managing the intangible, sanctuary of dreams. D. Harmon and A. D. Putney (Eds.), *The Full Value of Parks, from Economics to the Intangible*. Rowman and Littlefield.

Finlayson, C. M., Bailey, B. J., Freeland, W. J. & Fleming, M. 1988. Wetlands of the Northern Territory. In: A.J. McComb & P.S. Lake (Eds.). ***The Conservation of Australian Wetlands.*** Surrey Beatty & Sons, Sydney, pp. 103–126.

Harmon, D. 2003. The source and significance of values in protected areas. D. Harmon and A. D. Putney (Eds.), *The Full Value of Parks, from Economics to the Intangible*. Rowman and Littlefield.

Harmon, D. and Putney, A. D. (Eds.). 2003. *The Full Value of Parks, from Economics to the Intangible*. Rowman and Littlefield.

Jackson, S. 2004. *Preliminary Report on Aboriginal Perspectives on Land Use and Water Management in the Daly River Region, Northern Territory*. Report to the Northern Land Council, CSIRO, Sustainable Ecosystems.

Land & Water Australia. 2004. *Australia's Tropical Rivers Prospectus and Program Plan 2003/04 – 2009/10*.

Memmot, P. and McDougall, S. 2004. Living on Saltwater Country, Southern Gulf of Carpentaria. *Sea Country Management, Needs and Issues*. Hobart, Australian National Oceans Office (NOO).

Millennium Ecosystem Assessment. 2003. *Ecosystems and Human Well-being: A Framework for Assessment*. Island Press.

Moberg, F. and Folke, C. 1999. Ecological goods and services of coral reef ecosystems. *Ecological Economics*, No. 29, pp. 215–33.

NLC. 2004. *Environmental Management Status Reports for Aboriginal Lands in the Northern Land Council Region*. Supporting document to the Caring for Country Strategy 2003 – 2006. Northern Land Council.

Pagiola, S., von Ritter, K., Bishop, J. 2004. *Assessing the Economic Value of Ecosystem Conservation*. Environment Department Paper No. 101. Washington DC, World Bank.

Palmer, L. 2004. Fishing lifestyles: 'territorians', traditional owners and the management of recreational fishing in Kakadu National Park. *Australian Geographical Studies*, Vol. 42, No. 1, pp. 60–76.

Pomeroy, R. and Berkes, F. 1997. Two to tango: the role of government in fisheries co-management. *Marine Policy*, Vol. 21, No. 5, pp. 465–80.

Posey, D. A. 1999. *Culture and nature, the inextricable link. Cultural and Spiritual Values of Biodiversity,* A Comprehensive Contribution to the UNEP Global Biodiversity Assessment.

PWCNT. 2000. *A Strategy for Conservation of the Biological Diversity of Wetlands in the Northern Territory of Australia*. Parks and Wildlife Commission, Northern Territory.

Ramsar. 2002. Resolution VIII.19 on Cultural values of wetlands. *Guiding principles for taking into account the cultural values of wetlands for effective management of sites.*

Shultis, J. 2003. Recreational values of protected areas. D. Harmon and A. D. Putney (Eds.), *The Full Value of Parks, from Economics to the Intangible*. Rowman and Littlefield.

Storrs, M. J., Yibarbuk, D. M., Whitehead, P. J., Finlayson, C. M. 2001. The Role of Western Science in Wetland Management by Aboriginal Communities in the 'Top End' of Australia. In: *Science and Local Communities, Strengthening Partnerships for Effective Wetland Management*. Carbonell, M., Nathai-Gyan, N., Finlayson, C. M. (Eds.). pp. 7–13. USA. Ducks Unlimited Inc.

Stuip, M. A. M., Baker, C. J. and Oosterberg, W. 2002. *The Socio-Economics of Wetlands*. The Netherlands, Wetlands International and Riza. The Netherlands.

Session 6

Food security and livelihoods: threats and opportunities of sacred natural sites

The sacred Mijikenda Kayas of coastal Kenya: evolving management principles and guidelines

Anthony Githitho, National Museums of Kenya, Kenya

Summary

Kayas or *Makaya* are the sacred forests of the coastal Mijikenda people of Kenya and they possess high biodiversity. Preserved by traditional custom for generations, they are now gazetted National Monuments and have been nominated for inscription as World Heritage Sites. A number of management principles for these unique sites have gradually evolved, using lessons learnt by the National Museums of Kenya and other organizations, working with *Kaya* elders and local communities over the years. If applied at various levels, from the national to the local, the guidelines would help to define priorities, roles and responsibilities as well as rights for various stakeholders. They would inform activities being undertaken at various levels, from national policy and law to local management, and would serve to minimize conflict among users. The principles recognize the primacy of local sacred values above all others and the authority of traditional custodians. However they also appreciate the need for national laws and institutions to support and back up local conservation laws. They address the questions of visitation to the sites by non-locals, research activities and resource utilization, among others.

Fig. 1 Digo Women gathering thatch at Kaya Muhaka [left]

Fig. 2 Kaya Kambe Forest Scene [right]

Introduction

The sacred *Kaya* forests are residual patches (of between 10 and 400 ha) of the once-extensive lowland forest of coastal Kenya. They are highly diverse ecosystems and have a high nature conservation value. At present over fifty of these patches have been identified in the contiguous coastal districts of Kwale, Mombasa, Kilifi and Malindi.

Local traditions maintain that the forests historically hid small fortified villages (*Kaya* means homestead) of the Mijikenda ancestors when they first appeared in the region over three centuries ago. Such measures were necessary to protect themselves from marauding groups of pastoralists who were constantly in pursuit. As conditions became more secure from the late nineteenth century, the groups left the forest refuges and began to clear and cultivate land away from them. The original village sites, often marked by forest clearings, were maintained by the Kaya elders, as sacred places for burial grounds and traditional ceremonies and also as a symbol of community identity. The secret protective magic of each Mijikenda group (*Fingo*) was believed to be hidden there. Cutting of trees and destruction of vegetation around these sites was prohibited, and while the surrounding areas were gradually converted to farmland, the *Kaya* sites remained as forested patches of varying size. All of the nine Mijikenda groups have a *Kaya* or *Kayas* with which they are identified.

Threats to the *Kayas*

There has been a gradual loss of knowledge and respect for traditional values among many Mijikenda, particularly in the last three or four decades, because of the inevitable effects of 'progress'. Economic, social, cultural and other changes in society in the twentieth century affected social cohesion and the traditional values of local communities. There was also rising demand for forest products and land for agriculture, mining and other activities because of increased population. As a result many of the *Kaya* forest sites were exploited in various ways, suffered degradation, and a number disappeared altogether.

Conservation activities

Following appeals from local communities and conservationists, the state began in 1992 to gazette the *Kayas* as National Monuments through the National Museums of Kenya. To date, a total of forty sites out of over fifty have been gazetted. Some were also declared Forest Reserves. The National Museums of Kenya then formed the Coastal Forest Conservation with the specific task of looking after the *Kayas* in collaboration with local people. The work of the unit has included boundary demarcation, protection, awareness activities and support of local development projects.

Nomination of the *Kayas* for World Heritage Status

In 1999 the National Museums of Kenya began the process of applying for nomination of the *Kayas* to World Heritage Status, which culminated with the compilation of a nomination dossier for the *Kayas* in 2004. In the dossier a convincing argument is given for why the Kayas have universal value.

> The *Kayas* are an outstanding and unique African example of how the collective attitudes and beliefs of a rural society have shaped or sculpted a landscape over time in response to prevailing needs. In effect they can be said to be the product of a collective conscious and unconscious act of creation of a people. They are also a highly aesthetic symbol of the interrelation of man and nature, a rich blend of natural and cultural values. Prominent on hills and other strategic sites, they reflect evolving human priorities. They remain relevant to the Mijikenda and in changing ways will continue to do so in the future. … Without the attendant associations and values the *Kaya* is just a forest like any other but with them it is transformed. In the African context the spiritual or psychic dimensions are as important as the material, physical and natural. All the elements are essential and mutually reinforcing.
>
> *Kayas World Heritage Nomination Dossier (Kenya)*

Primary values of the *Kayas* today

The Mijikenda *Kayas* forests can be said to have three primary dimensions to be considered in the development of management principles and guidelines. These are:

- traditional cultural values as sacred and ritual sites for local communities
- biological diversity especially as regards to plants, which is of national importance
- natural resources: *Kayas* are potential sources of forest products and agricultural land for neighbouring communities.

In general the goals of conservation of traditional cultural and spiritual values and maintenance of biological diversity have tended to be fairly harmonious. However the perception of the *Kayas* by some local people as areas from which to extract natural resources has tended to be in conflict with the other two dimensions. Below the main aspects of the three dimensions are described.

The traditional cultural values of the *Kaya*

The continued existence of the *Kaya* forests despite intense land-use pressures up to the onset of state legal protection in the early 1990s is proof of the continued existence of a traditional system of beliefs and associated rules which had been relatively effective in protecting the forests up to the present. Local perception of the *Kayas* as sacred is deeply embedded in Mijikenda folklore and myth. They are believed to be the sites where the ancestors of the Mijikenda first lived, although they are no longer inhabited except by the spirits of the departed forefathers. Many *Kayas* bear the imprint of human settlement, and their sacred symbolism is closely linked to their past identity as sheltered village areas. As indicated earlier, the term *Kaya* itself refers to a homestead. Sites that are recognized as *Kayas* have certain common elements related to this

historical human use and contemporary ceremonial use. The most important of these are listed below.

Designated paths of entry and exit, *virya*

These were usually the only permitted access to the historical villages and had gates with guards. They persist today as well-worn tracks and are particularly distinct in an aerial view at most sites. During ceremonies there is often a symbolic cleaning or clearing of the paths as one would clean a homestead. The virya are the only acceptable means of access even today for all purposes. While the *virya* may be used by all, individual *Kayas* have requirements such as the removal of headwear or shoes.

A central clearing or *Kaya*

The central clearing or *Kaya* approached using the traditional paths through the forest, is the definitive feature of a *Kaya* forest, and marks the site of the historical village or settlement. In most *Kayas*, apart from the sometimes extensive opening in the forest there are few other physical reminders of former human activity. From the air the *Kayas* are very clearly distinguishable.

On occasion for certain traditional rituals, ceremonial huts may be built by the *Kaya* elders for use for the duration of the ceremonies, using materials obtained from the *Kaya* forest. Within the central clearing the elders are able to point out sections occupied by the ancestors of particular clans, and where the *Moro* or central meeting hut stood. The *Kaya* is among the most sacred or exclusive sites. Members of the local community may enter with little restriction, but all other visitors are prohibited without certain permissions or guidance by the elders. Indeed whether a 'stranger' is welcome or not, in the more conservative sites it is regarded as necessary to undertake cleansing after his or her departure.

The *Fingo* or talisman

Traditions relate that each group, in establishing a *Kaya*, buried within the site very powerful protective magic that they had carried with them from the original home of the Mijikenda, at a place called Singwaya far north in present-day Somalia. This talisman or *Fingo* was buried either in a clump of trees within the village, or in a secret spot or spots in the thick surrounding forest. Sometimes the location could be approximated but only in a very general way. In other cases the location of the Fingo is a mystery and can only be speculated on. In all cases the site of the *Fingo* is the most sacred area of the *Kaya*.

Burial areas

Sometimes within the main clearing but often separate and distinct are the traditional communal burial areas where members of the community were buried. In the distant past there may have been carved timber graveposts or *vigango* indicating the burial spots, or other types of markers, but most of these have disappeared. In certain cases the different clans of the tribe had their own sites. There are in most cases separate burial areas for outsiders who died in the *Kaya* or those who for some reason were deemed unclean and hence would pollute it. In terms of sanctity the burial areas are less exclusive but are respected as the resting place of community ancestors.

Graves of outstanding past leaders or founders of the *Kaya* and community tend to be sited on their own and separate from the others. They are often marked by single trees or a clump of trees, but sometimes with boulders, depending on the *Kaya*. Great ancestors include spiritualists and healers whose graves may not be disturbed without harm.

Special use areas and objects

In many *Kayas* other zones exist, associated with both the ritual and spiritual dimension and aspects of historical land-use. Often these are peripheral to the *Kaya* forest and sometimes quite separated from it, although initially they too may have been surrounded by forest. Some *Kayas* have clearings which were originally cattle enclosures. Other sites have ritual importance, like the 'cooking' area where women undertake cooking during the conduct of traditional ceremonies.

Fig. 3 Traditional path into Kaya Fungo

In some *Kayas* a particular natural object such as a tree (particularly fig trees or *Migandi*) or a rock within the forest would be ascribed with particular sacred qualities or associations. Unusual or curious landforms or features in the *Kaya* forest area may also be treated in the same way. Exceptional animals such as large snakes or birds were also protected by traditional custom and were not to be disturbed.

The forest environment

Surrounding and enclosing all these elements is the forest or *Msitu*. It is the forest that provided concealment for the historical villages and heightens the sense of mystery and secrecy in the *Kayas* today. Hence, though it is not 'sacred' in itself, it protects the sacred, and without it the *Kaya* cannot exist. In fact the state of conservation of the forest buffer is often traditionally seen as being a reflection of the spiritual condition of the site. Hence removal of trees or vegetation in the forest is one of the key infringements. Cutting of trees within the *Kaya* usually brought heavy penalties on the offender, although these varied among the sites. Some *Kayas* recognized an inner zone immediately surrounding the central clearing and an outer or peripheral zone. In the outer zone some extraction was permitted of poles, firewood, thatch and other products, but no disturbance or removal was permitted in the inner zone.

Biological diversity values

The importance of *Kayas* as areas of biodiversity cannot be overstated. To take one example, using 'vt', a measure of relative conservation value combining the known geographic range of a species and rarity values for plants, seven out of the twenty sites with the highest 'vt' in coastal Kenya were found by a key coastal forest survey to be *Kaya* forests (Robertson and Luke, 1993). This is highly significant considering that the total area covered by the *Kayas* is now estimated at 6,000 ha or about 10 per cent of the total amount of remaining coastal forest (Githitho, 2003). The disproportionately large number of rare plants recorded for the *Kayas* may reflect the fact that the *Kaya* forests cover a broader range of habitat and micro-climatic conditions. This increases the number of species likely to be represented within these fragments. It now accepted that more than half of Kenya's rare plants are found in the coastal region or the floral area K7 as defined in the Flora of Tropical East Africa. Many are found within the *Kaya* forests. As more data is collected similar patterns are emerging with other taxonomic groups.

On individual forested sites the rare species, whether plants or other groups, may be distributed in any manner as nature has wrought within or outside the exclusive ritual areas. This is an issue for scientists undertaking studies or monitoring within the *Kayas* who need to be aware of the various ritual/cultural zones in the *Kayas* and the conditions, if any, for access. In terms of conservation, however, the dominant traditional *Kaya* ethic of non-disturbance is highly favourable to nature conservation.

Natural resource values of the *Kayas*

Kaya forests, as traditional conservation areas and as National Monuments, are sometimes understandably regarded as opportunities forgone for the utilization of natural resources (Nyamweru, 1997, p. 69). This perception is increasing with a growing population and also with the erosion of cultural traditional values and beliefs. The *Kayas* occur in an economically depressed region where poverty is rife and people struggle to meet basic needs. There is a growing demand for forest products such as timber and poles, and land for agriculture, mining and other activities. *Kayas* are usually the only remaining areas of natural vegetation, making them highly vulnerable, and pressure to use the forest to meet basic needs has been the cause of degradation of many sites.

Though there are a few sites covering hundreds of hectares, most of the forest patches are small and below 20 hectares. This, combined with the high population densities at some of the locations, makes it difficult to realistically provide for sustainable consumptive use as an element in a multiple-use framework. For the large sites it may be possible to do so, but studies at selected *Kayas* show that they have already been significantly modified by prolonged extraction.

A serious problem facing communities in specific *Kaya* areas is the damage done by wildlife residing in the *Kayas* as the only local wild areas. The damage to crops and other developments creates a negative attitude to the *Kayas* (Nyamweru, 1997, p. 70).

Developing basic principles for management

The National Museums of Kenya have been active in formulating principles for the utilization and management of the *Kaya* forests over a number of years. These principles have been derived from lessons and insights acquired in the work of the museums and other organizations in *Kaya* conservation. There is an increasing urgency in the need to have these in place for numerous reasons. As a result of the increased conservation activities directed at the *Kayas*, their national and international profile has increased tremendously. Where before many were obscure sites known only to local elders, they are now sources of interest not only regionally and nationally but also internationally.

As National Monuments and Forest Reserves, the *Kayas* have changed from being a purely local community heritage to national heritage. They have become the concern of national conservation and management institutions. Local authorities have also remained nominal trustees for most *Kaya* land even though they are National Monuments. These various bodies are mandated under

national laws to help protect and conserve the *Kayas* yet they need to conduct their activities in a manner which does not violate the very values that make *Kayas* unique.

Commonly agreed guidelines would ensure that the various stakeholders, from the global and national to the local level, pursue their priorities without conflict. The guidelines would help define roles and responsibilities for the numerous interested parties. However in this scheme of things it is important that the values and priorities of local Mijikenda communities who are the originators of these important sites are paramount.

The pressure to put the *Kayas* to alternative human uses besides conservation of natural and cultural heritage is constant. While it is unlikely that small *Kaya* protected areas could sustain subsistence uses of any kind, it may be socially and politically impractical to prevent all subsistence uses in forest sites that are above a certain size. General guidelines are needed where such situations occur so that the primary sacred and biodiversity values are not compromised.

A number of general principles or best practices for the management of *Kayas* have evolved over the past few decades. They have developed from the experiences and lessons learnt by organizations like the National Museums and others in their work with *Kaya* communities and elders. The process has been gradual and complex because of the great variation in rules and regulations and their observance from site to site, but lessons have clearly been learnt. It is hoped that these principles will be a valuable contribution to the continuing process of review of policies and practices at all levels.

Principles relating to policy and law

In general the conservation of the cultural should be regarded as the highest objective of *Kaya* management, and all other objectives should be subsidiary. Fortunately this position is not in conflict with the conservation of biodiversity, but complementary to it. The maintenance of the sanctity of the site is usually synonymous with the protection of its natural forms. However it is often incompatible with extractive or consumptive uses.

State laws and local traditional conservation should complement each other in a relationship that has sometimes been described as 'legal pluralism' (Mumma, 2000). Local rules and regulations should have effect to the extent that they are respected by local people or those to whom they are applied. Where they are disregarded because of a loosening of cultural controls or other reasons, or where the scale or sophistication of the offence is great, national laws should immediately be applied. In this way they will act as a back-up to traditional laws, but infringements should as much as possible be handled at a local level by the *Kaya* elders and government administrators in the local *Kaya* areas.

Guidelines for visitors to the *Kayas* including researchers

The *Kayas* are sacred sites for the Mijikenda. As related elsewhere, they are figuratively and spiritually the 'home' of the various Mijikenda groups. In contrast to the case with visiting non-*Kaya* forests, those wishing to visit should make their desires known to the 'homeowner' and hope to be 'invited'. While within, guests should yield to the guidance and direction of the local custodians on how to conduct themselves. Additionally all visits to *Kayas* by non Mijikenda or non-members of that particular *Kaya* group are regarded as polluting. Therefore the site may need to be cleansed before or after the visit. For long-term activity or visits such as for scientific work, rituals may be necessary to regularize the activity or to 'induct' the visitor.

Local rules of conduct for visitors should be observed by all 'strangers' who enter the *Kayas*. These vary between Mijikenda groups and even from site to site, but usually include:

- Making an appointment with the *Kaya* elders and ensuring you are accompanied on your visit by an elder or delegated person, especially if you are visiting the central clearing.
- Not straying from the traditional paths or *virya* in your movements within the *Kaya*. Asking when you are unsure.
- Avoiding the sensitive sacred sites pointed out to you by your hosts while you are in the *Kaya*.
- Observing rules concerning apparel for visiting the site, if any. On some sites, for example, men should not cover their upper body and should wear a sarong or waist-cloth. On other sites, no shoes or hats may be worn.
- Observing decorum, respect and appropriate behaviour while on the visit. Violent, noisy, disruptive or overtly sexual antics are not tolerated. Among the Mijikenda it is extremely offensive to point with outstretched finger, and the same applies in all *Kaya*.

* Not removing anything from the sacred site: in other words, leaving it as you found it. If you eat fruit from trees within the site, carry nothing out.
* Making a contribution for your hosts to cleanse the site after you depart. It is the height of malice to fail to do this as the elders will need to meet these costs out of their own pocket if you fail to do so.
* Where it may be necessary to overlook a rule or regulation for one or another reason as may be occasioned in research, cleansing may have to be undertaken, or rituals performed for this concession, and the visitor will need to cover the costs. The effect is to acknowledge that the activity is irregular or unusual.

Utilization of natural resources from *Kayas*

The pressure on *Kayas* as the only local source of forest products and additional land for farming is the most frequent cause of conflict in *Kaya* conservation. Unfortunately there are few easy solutions to this problem. This is despite the fact that most Mijikenda readily admit to the importance of *Kayas* as spiritual sites.

As many of the small forest patches cannot sustain extraction in any significant degree, consumptive use (except for ritual purposes) should be discouraged or disallowed. Most *Kaya* elders and local people will tend to agree on this, as interference of this kind has a significant effect on the vegetation screen and hence the 'sanctity' of the site.

In the larger sites it is politically unfeasible to attempt this because of the impression of abundance, and some compromise needs to be worked out. At the very least a central core or non-use area should be clearly delineated, as was traditionally done on some sites, although because of the high population levels today it would prove difficult to ensure sustainable levels of use even if this were done. For long-term resolution a policy of encouraging the development of wood resources outside the protected *Kaya* should be pursued.

Part of the problem on some sites stems from the process of creating a protected area during demarcation. If this process is not participatory so that all adjoining farmers feel that their claims have been fairly treated, there will be repeated incursions on the site. Hence the negotiation process should be very exhaustive.

References and further reading

Githitho, A. N. 2002. Coastal plant conservation in East Africa: the work of the National Museums of Kenya in the sacred forests of coastal Kenya. M. Maunder et al. (Eds.), *Plant Conservation in the Tropics: Perspectives and Practice*. Kew, UK, Royal Botanical Gardens.

Githitho, A. N. 2003. The sacred Mijikenda Kaya forests of coastal Kenya and biodiversity conservation. C. Lee and T. Schaaf (Eds.), *The Importance of Sacred Natural Sites for Biodiversity Conservation*. Proceedings of the International Workshop held in Kunming and Xishuangbanna Biosphere Reserve, Peoples Republic of China. Paris, UNESCO.

Luke, W. R. Q, and Githitho, A. N. 2003. Biodiversity and the Kaya Forests. J. Hoorweg and N. Muthiga (Eds.), *Recent Advances in Coastal Ecology*. African Studies Centre, Research Report 70/2003. Leiden, African Studies Centre.

Mumma, A. 2000. Legal aspects of cultural landscape protection in Africa. M. Rossler and P. Ceccarelli (Eds.), *The World Heritage Convention and Cultural Landscapes in Africa, Expert meeting – Tiwi, Kenya*. Paris, UNESCO.

Nyamweru, C. 1997. *Report on Socio-cultural Research Carried out in Kwale and Kilifi Districts of Kenya, March to May 1997*. Department of Anthropology, St Lawrence University (unpublished).

Robertson, S. A. 1986. *Preliminary Floristic Survey of the Kaya Forests of Coastal Kenya*. Unpublished Report to the Director, National Museums of Kenya and WWF International. Nairobi, Kenya.

Robertson, S. A. and Luke, W. R. Q. 1993. *Report of the Coast Forest Survey*. Unpublished Report to the Director, National Museums of Kenya and WWF International. Nairobi, Kenya.

Spear, T. 1978. *The Kaya Complex: A History of the Mijikenda Peoples of the Kenya Coast to 1900*. Nairobi, Kenya Literature Bureau.

UNESCO/World Conservation Union (IUCN) (n.d.) *Working Guidelines for the Management of Sacred Natural Sites*. (Annex II of this publication) www.unesco.org/mab/SNS/guidelines.htm/ (Accessed 20 December 2005).

Fig. 4 Giriama memorial dance [left]

Fig. 5 Ritual hut in Kaya Kambe Central Clearing [right]

The status of the Solovetsky archipelago in the UNESCO World Heritage List

Nadezhda Cherenkova, Moscow State Lomonosov University, Russian Federation

Summary

The Solovetsky archipelago is situated in the middle of the White Sea (Russia, 65° N, 35° E). People have been investigating the wildlife and environment of the islands and their adjacent waters for two centuries, and during that time the following natural phenomena have been observed:

* a unique Beluga whale reproductive aggregation several metres from the shoreline
* complete representation of the morphological structures of the earth surface of the Holocene age, of aquatic glacial and marine origin
* old-growth forests (350-plus years old)
* unique bird life
* rare plants
* relic complexes of marine hydrobionts
* wetlands which meet the criteria of the Ramsar Convention on Wetlands.

Introduction

According to expert assessments by leading Russian scientists, the nature complexes of the Solovetsky archipelago meet all the criteria established for a World Nature Heritage site by the UNESCO Convention on the Conservation of Cultural and Natural Heritage.

The importance of the cultural heritage of the Solovetsky Islands was acknowledged in 1992. In that year, the Solovetsky Cultural and Historical Ensemble was included in the list of World Cultural Heritage Sites as a monument of medieval monastic culture. In 1998 an international inspection was undertaken to assess the Solovetsky Historical and Cultural Complex as a UNESCO World Heritage Site. One of the objectives was to determine the prospects for renominating the Solovetsky Complex as a site of both cultural and natural value. The mission concluded that there were sound reasons for nominating the Solovetsky Islands and Adjacent Waters as a 'mixed heritage site'.

The complex on the Solovetsky archipelago is important not only for its internationally significant cultural monuments but also for its unique natural value. It is important to bear this in mind, given the current bias towards the conservation of only the cultural heritage. The active development of tourism in this region could lead to the destruction of the unique natural environment of the northern archipelago and the integrity of the entire complex (and thus its world-renowned cultural heritage). This danger would be eliminated if the Solovetsky Islands were granted the status of mixed cultural and natural heritage.

The boundaries of the nominated site coincide with the boundaries of the specially protected territory of the Solovetsky State Historical, Architectural and Natural Museum Reserve, including the surrounding 5 km area of water. The Museum Reserve has a special service equipped with land and sea vehicles that is responsible for the protection of the natural landscape.

In 1959 the forests of the Solovetsky Islands were given the highest protection status (ranked I) by decree of the Ministry of the Russian Soviet Federative Socialist Republic. In 1988 the sanctuary's forests were listed as 'forests of historical importance'.

Archaeological heritage of the Solovetsky Islands

Some of the oldest signs of human habitation in northern Europe have been found on the Solovetsky Islands. The latest data suggest that people came to Solovki between 5000 and

4000 BC. Four seasonal settlements from that time have been found on Solovki. In total, twenty-five primitive settlements dating from between 5000 and 1000 BC have been described.

The archaeological heritage of the Solovetsky Islands from the Boulder period includes 1,100 Bronze Age artefacts. The most famous archaeological sites on Solovki date back to between 2000 and 1000 BC. They include boulder labyrinths, burial mounds and Neolithic dolmens, which probably had religious significance.

The richest prehistoric cultural site in Solovki is on Bolshoy Zayatsky Island, where there is a 600,000 sq m open-air archaeological museum. This rich exposition of the Solovetsky Islands Neolithic culture contains fourteen labyrinths, over 900 mounds and dozens of other boulder structures. This

unique archaeological preserve is of great importance for understanding the religious beliefs and practices of the early people of the Barents–White Sea region.

Studies of medieval monuments of pre-monastery and monastery cultures illuminate periods of Solovki history that are not well described in manuscripts. Three ancient Lapp religious burial complexes have been described and are currently being studied.

For ancient settlers, the Solovetsky Islands were a mystical place where the world of the living met the world of the dead. Judging by the number of primitive settlements, religious sites, burial sites and symbolic constructions still being discovered, the Solovetsky Islands were a religious and spiritual centre of the White Sea region for several thousand years.

Solovki as a sacred site

It is striking that successive generations of Solovki settlers have revered the Solovetsky Archipelago as a sacred place. As centuries passed, the nexus of primitive religions became one of the greatest spiritual centres of Orthodox Christianity. This was largely due to the archipelago's advantageous geographical location and natural features, as its isolation from the continent has been a boon to believers seeking solitude throughout history.

The Solovetsky monastery was founded by the first permanent dwellers – saints Venerable Savvati, German and Zosima – who were devotees of work, fasting and prayer. In 1436 the first wooden cells and churches were constructed. These were the prototypes for Orthodox Church constructions in Northern Russia. The monastery grew rapidly, and acquired a reputation of sacred power. In 1552 the construction of Church of the Assumption and refectory began. One of the biggest monastery buildings of the time, it seated 400 people. The monastery's symbol of beauty and power, the Cathedral of the Transfiguration, was built from 1558 to 1566.

By the end of the sixteenth century, a boulder fortification had been constructed which gave the Solovetsky monastery a primary role in the defence of Russia's northern borders.

The central complex of the Solovetsky monastery became a core part of the spiritual, historical, cultural and material heritage of the great Russian church.

Monks developed other parts of the archipelago as well. Forest and water routes connected the main monastery complex with remote sketes and hermitages. These smaller monastic communities were originally places of solitude and prayer, but later adopted the features of autonomous economic subdivision, with diverse activities such as haymaking, cattle-breeding and vegetable gardening. The limits on the cells' territory imposed by the natural

Fig. 1 Geographical position of the Solovetsky Islands. The Solovetsky Islands (Solovki) are located in the White Sea. The archipelago comprises six relatively large islands (Bolshoy Solovetsky Island, Anzer, Bolshaya Muksalma, Malaya Muksalma, Bolshoy Zayatsky and Maly Zayatsky) and over 100 small islands. Photo: O. Korobova [left page]
Fig. 2 Neolithic labyrinths on the Bolshoy Zayatsky Islands. Photo: A. Cherenkov [left]
Fig. 3 St Savvati and St German, an antique icon [right]

environment served to unite the cell houses into unique spiritual and natural entities.

Orthodox believers seek salvation through work and prayer. While the Coenoby managed monastic life and constructed churches and buildings, it was above all committed to prayer, thus preserving the long heritage of the Solovetsky archipelago as a sacred place. Breathtakingly beautiful natural features such as forests, lakes, the sea, sunrises and sunsets are in complete harmony with the churches, helping supplicants cast their minds to spiritual matters and forget the vanity of worldly existence.

The spiritual life of the monastery is now being revived after seventy years of atheism. Today, the Spaso-Preobrazhensky (Transfiguration) Monastery is home to fifty monks and novices (Figure 4). The abbot of the monastery, Archimandrite Joseph,

is working hard to restore the monastery churches and preserve the environment of the Solovetsky Islands. Throughout history the monks of Solovki have held sacred the entire archipelago and have been keenly aware of its vulnerability.

The interrelation of humanity and nature

At the Solovetsky monastery, any human interference in the natural environment was given much thought. For example, the monks stopped salt extraction on the islands and brought timber from the mainland for large building projects to preserve the forests. Great care was taken to replenish natural resources. For instance, the monks brought reindeer to the islands and experimented in fish farming.

Reverent respect for God's gifts was a guiding principle. Hunting with guns and the construction of private buildings were strictly prohibited on the Solovetsky Islands.

To improve the land, and drain bogs to form hay fields, a complicated hydro-canal system was created which united more than seventy-two lakes on Bolshoy Solovetsky Island (Figure 5). The artificial Saint Lake became the final link of the great canal system. This lake still supplies the monastery with water. Another marvel of hydrotechnics on the Solovetsky Islands is the boulder dam. Monastery engineers and builders created this dam between two big islands. Numerous sandbanks formed the foundations of the 2 km long stone bridge and determined the course of the dam as it meanders to the sea. In the mid-nineteenth century settlers using natural materials created great constructions which astonish modern viewers.

Many constructions on Solovki were the first of their type in Russia. The stone harbour, the hydropower station and the unique wet-dry dock were first built on Solovki. These constructions are special because of their unique design, incorporation of natural landforms (using the different water levels of the sea and lakes) and use of natural materials.

The great defender of the Russian Orthodox Church,

Father Superior Philip, became the head of the monastery in the mid-sixteenth century and did much to develop it. 'Philip's *sadki* (gardens)', were a marvel of the time. Nature inspired the master in the design of these holding pens for fish: natural shallow bays separated from the sea by boulder dams up to 150 m long. For several centuries monks used these bays to keep live herring and cod.

The monastery's famous botanical garden, which also housed the Makarievskaja Pustyn Hermitage, was an example of humanity and nature existing in perfect harmony. Since the hermitage's foundation in 1822, the monks of Makarievskaya Pustyn cultivated plants. This was possible due to the area's unique natural features, microclimate, geographical features and natural beauty. Monks developed apiculture for pollinating their plants and cultivated medicinal and exotic species. The fruits of their labour, flowers, watermelons and grapes miraculously growing in polar regions, astonished pilgrims. The garden became one of the wonders of Solovki. While it originated as a hermitage, the garden later became a living representation of an earthly paradise which greatly impressed pilgrims and visitors to the islands.

In 1960 the garden was given the status of 'botanic

garden of the nineteenth century' by decree of the Council of Ministers of the USSR. The collection of the garden includes more than 130 species and varieties of trees and bushes, more than 150 species and varieties of grasses, and about 250 species of flowers and other annuals.

There are several architectural monuments on the garden territory, the greatest of which is the Archimandrite's *dacha* (summer house). It was constructed from large larch logs brought from the mainland between 1859 and 1862. Its construction is unique on the islands of Solovki.

Charles, Prince of Wales, visited the garden in 2003. He established the tradition of honorary guests planting a tree on their first visit to the garden.

Nature study

The first studies of the islands' natural environment were undertaken in the mid-eighteenth century and the first Russian Biological Station was founded there in 1882. The highly educated Father Superior Melety understood the importance of the White Sea research and supported scientific undertakings. The station's activities produced outstanding results. Eighteen years of careful research formed the basis of our knowledge of White Sea biology and hydrology. Investigations undertaken at the station yielded sixty significant scientific papers. This monument of Russian science continues to the present.

The scientific investigation of the islands continued even during the tragic period of the Solovetsky gulags. Imprisoned scientists formed the Solovetsky Regional Research Society and worked in chemical and biological laboratories, the botanical garden, fur farm, museum and meteorological station. Studies on the acclimatization of plants were developed. Despite overwhelmingly difficult conditions, the scientists successfully performed serious theoretical and applied studies. In that period Russian scientists bred the world's first sable in captivity, and the first muskrat in the USSR was acclimatized there. The world-famous scientist and theologian Pavel Florensky developed the process of producing iodine from sea algae, and other researchers studied the archipelago's flora and fauna.

Today, monitoring of nature is carried out by several scientific organizations: Moscow State University (avifauna of the Solovetsky archipelago and contiguous Onezhsky Bay, Flora inventory), the Institute of Oceanology of the Russian Academy of Science (the reproductive gathering of Beluga whales), St Petersburg State University and the Laboratory of Sea Benthos Ecology of the St Petersburg House of Youth Creative Work (the state of marine populations in the sea waters), Pomorsky State University (Geophysics) and others.

The indissoluble connection of the cultural and natural heritage of Solovki

The spiritual, cultural and natural components of the Solovetsky complex are deeply connected. The harmony and interdependence of these elements can be traced throughout the long history of the islands, and are reflected in its economy and aesthetics. The Solovetsky Cultural and Historical Complex, which is already included in the UNESCO World Heritage List, is a vital part of its environment; it depends on its surroundings and commands a special place in the landscape.

The landscape preserves the natural dignity and outstanding beauty of the islands, and yet everything is adapted to humanity's use. Architectural constructions, meadows, kitchen gardens, roads and parks harmoniously interact with nature and complement its forms and proportions.

Fig. 4 Central complex of the monastery. Photo: A. Cherenkov [left page, left]

Fig. 5 One of the canals. Photo: A. Cherenkov [left page, right]

Fig. 6 The Prince of Wales plants a Siberian fir tree. Photo: A. Parshin [left]

Fig. 7 Researcher and ringed seal. Photo: A. Cherenkov [right]

The Solovetsky Islands are a representative area of northern Russia. The landscape seems to embody the spiritual aesthetics of Russian monastic life. With their many material, sacral and memorial treasures, the Solovetsky Islands exemplify a harmony between nature and the spirit created over many generations. Indeed, this balance between humanity and nature is one of the outstanding historical achievements of the Solovetsky Monastery.

Value of nature: conformity to the criteria of the UNESCO World Natural Heritage List

In a decision of the Sixteenth Session in 1992, the World Heritage Committee recognized the importance of the cultural heritage of the Solovetsky Cultural and Historical Complex as an example of medieval monastic culture and added it to the World Cultural Heritage List (UNESCO certificate of 14 December 1992). Materials to substantiate the listing of the cultural and natural complex of the Solovetsky Islands as a UNESCO Cultural and Natural Heritage Site have been collected during the past twenty years.

In 1998 the international inspection team headed by Herbert Stovel assessed the Solovetsky Historical and Cultural Complex, UNESCO World Heritage Site. One of the experts' objectives was to consider the prospects for renomination of the site. The advisory panel recognized that there were solid reasons for renominating the Solovetsky Archipelago with Adjacent Waters as a site of mixed cultural and natural heritage. The group of experts concluded that Russian authorities should assess both the cultural and natural value of the site and prepare the documents for renomination.

Long-term monitoring of the natural components of the Solovetsky Cultural and Natural Complex has revealed a number of important natural features, including:

* An unique Beluga whale reproductive aggregation several metres from the shoreline.
* A complete record of the morphological structures of the Earth's crust of fluvioglacial and marine origin, dating to the Holocene Age.
* The presence of a wide range of biomes including tundra-like nature systems, forest-tundra, taiga, mixed forest, littoral, coastal meadows and different bogs within a small area. These biomes developed in the isolated territory over a long period of time and make it possible to observe the ecosystems of several natural zones within a few kilometres.
* The presence of virgin old-growth forests (350-plus years old).
* 'Aapa' bog complexes situated beyond the principal area. These bogs are unusual for the biogeographic region under consideration and meet the criteria for selection of wetlands of international importance adopted by the states-parties to the Ramsar Convention. (The site is on the List of Protected Bogs of Russia.)
* Plant communities with significant species diversity for northern latitudes, making the Solovetsky archipelago a reference site for ecological and biological processes in coastal and marine ecosystems and habitats of rare regional plants.
* Features of hydrology and hydrochemistry determining a high degree of biodiversity and density of macrophytobenthos in the archipelago waters.
* The importance of the Solovetsky archipelago as a key ornithological area of international significance, where not less than 20,000 waterfowl gather simultaneously for nesting, rest and molting, and where rare bird species nest.
* Relic complexes of hydrobionts of aqua-fauna and phenomenal hydrobiological features; mass aggregation of marine mammals (bearded seal (*Erignathus barbatus*) and ringed seal (*Phoca hispida*)).
* The presence of many extremely picturesque landscapes (including cultural sites).

Below are four criteria by which the Solovetsky Archipelago with Adjacent Waters may be considered a site of World Cultural and Natural Heritage. The criteria are presented in order of importance. (Operational Guidelines for Implementation of the World Heritage Convention, UNESCO, WHC-99/2, 1999 (February).

N (i): The property should be an outstanding example representing major stages of the earth's history, including the record of life, significant ongoing geological processes in the development of landforms, or significant geomorphic or physiographic features of terrain

The archipelago contains a remarkable record of the Earth's history from the last phase of the Quaternary period (10,000 years ago) to the present Holocene epoch. The maritime

landscapes of northern Europe were formed in that period by fluvioglacial processes, marine transgressions and regressions and global tectonic rises along deep fault lines. The records of these processes are found both deep within the earth and in the outlines of modern landscapes. These are moraine hills covered with forests, garlands of glacial lakes, sandy fluvioglacial ridge-oses, sharp scarps in places of block raises in the island terrain, open active faultlines, a series of marine terraces from different ages, great sandy dunes, stony deposits, unique garnetiferous-quartz beaches, marine beachcomber with lagoons and other geographical features which make it possible to 'read' the history of the Earth's geological past.

The Solovki is a unique territory of exceptional scientific importance for the diversity and quality of the above-mentioned landscapes and geographical features. These natural complexes demonstrate the diversity of morphologic structures in the earth's crust. They provide a record of the earth's history in the late phase of the Quaternary period and the formation of island geosystems in northern latitudes from the combined activity of fluvioglacial, marine and geotectonic processes.

N (ii): The property should be an outstanding example representing significant ongoing ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals

The Solovetsky archipelago possesses various qualities meeting the requirements of this criterion to a greater or lesser degree. The continuing uplift (25 cm per century) and relative youth of the islands allow us to trace the evolution of the morphostructures of the earth's surface and to observe the evolution of terrestrial ecosystems, which evidently manifest themselves in successive series of over-moistened maritime biocenoses and result in the formation of specific ecobiomorphs in plant and animal groups.

N (iii): The property should contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance

The natural complexes of the Solovetsky archipelago and adjacent waters are of remarkable aesthetic value. The numerous picturesque views from high prospects, the diversity and vibrant colours of the coast, the dramatic contrasts of the near tundra, the beauty of its many pristine lakes, the primeval majesty of the taiga, pine forests transfused with sunlight, and animals unafraid of humans, all add to the outstanding aesthetic value and charm of the site. The ever-growing number of tourists to this site demonstrates the appeal of the area.

N (iv): The property should contain the most important and significant natural habitats for in situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation

Fig. 8 View at the Sekirnaya Mountain. Photo: A. Cherenkov [left page]

Fig. 9 The Beluga whale breeding group. Photo: IFAW [this page, above left]

Fig. 10 Arctic tern. Photo: A. Cherenkov [right]

Fig. 11 Osprey. Photo: A. Cherenkov [below]

High natural diversity in the archipelago, the presence of rare natural phenomena and key habitats testify to the exceptional importance of the islands for biodiversity conservation, both regionally and globally. The unique reproductive aggregation of Beluga whales (*Delphinaterus leucas*) – the only representative of cetaceans in the White Sea – at the western extremity of Bolshoy Solovetsky Island is of special interest. The importance of the species as a final link in the trophic chain of the marine ecosystem is evident. In the waters adjacent to Cape Beluzhiy local herds of up to 100 individuals reproduce within a very small area (up to 6 sq m). This localization is one of the criteria of uniqueness of the phenomenon under consideration. The reproductive gathering at the Cape Beluzhiy is the most abundant of all such aggregations known. It is an unique natural feature of world importance, the most representative and crucial for the conservation of biodiversity.

The Solovetsky Islands with Adjacent Waters is also a site on the List of Important Bird Areas in Russia. One of Europe's biggest colonies of Arctic tern (*Sterna paradisaea*), numbering up to 10,000 nesting pairs, is located on the archipelago. Solovki is also a principal molting area for the Common eider (*Somateria mollisima*). The archipelago is also of great importance as a resting place for many waterfowl and coastal birds migrating along the White Sea–Baltic Sea route.

More than 20 per cent of the world's lesser black-backed gulls (*Larus fuscus fuscus*) nest on the archipelago. The colonies of lesser black-backed gulls on the Solovetsky Islands are the world's largest. It should be emphasized that the population is currently characterized by stable growth, while the species is declining in the rest of its range. The White Sea subspecies of the black guillemot (*Cepphus grille grille*) on the Solovetsky archipelago makes up between 15 and 20 per cent of the total world population of the species. The archipelago is the only site located out of the main habitat where the shellduck (*Tadorna tadorna*) nests.

Though small in size, the islands of the archipelago are characterized by a great number of protected predatory bird species. Six pairs of white-tailed sea eagles (*Haliaeetus albicina*) (listed in the Red Data Book of the World Conservation Union (IUCN)) and ten pairs of fish-hawk (*Pandion haliaetus*) (listed in the Red Data Book of Russia) regularly nest there. The northern falcon (*Falco gyrfalco*) and peregrine falcon (*Falco peregrinus*) (both listed in the Red Data Book of the IUCN), regularly appear during migration.

Heavy recreational use puts pressure on the Solovetsky Archipelago. The area contains features crucial for the conservation of the world's biodiversity and is itself a unique natural wonder.

The place of the Solovetsky archipelago among the Sites of World Cultural and Natural Heritage

In Russia, there are twenty-one World Heritage Sites: thirteen cultural sites and eight natural sites. Russia still has no mixed cultural and natural sites. The imbalance is evident in the numbers of cultural, natural and mixed sites considered to be of world value. Combined sites are especially poorly represented in the World Heritage List, with mixed cultural and natural sites making up less than 3 per cent of the total number of World Heritage Sites.

There have been several attempts to classify the Solovetsky Islands with Adjacent Waters as a 'cultural landscape'. In our opinion, there are serious reasons to renominate the site, and to move it from the 'cultural heritage' category to the 'cultural and natural heritage' category. Based on the following criteria, this move would be preferable to simply extending the site's nomination to a 'cultural landscape' in the 'cultural heritage' category:

* Criterion (iv) (biodiversity conservation) is of the highest priority with respect to the natural heritage of the Solovetsky Islands. Landscape development is not conducive to the well-being of the reproductive aggregations of birds and mammals on the islands. These aggregations are significant for the conservation of the species' populations on the archipelago and adjacent waters. Nesting grounds for birds listed in the Red Data Book, and indeed many unique natural features, have hereto survived on the Solovetsky Islands despite human activity.
* The geological-geomorphologic features of the site (criterion (i)) and revealed specific ecobiomorphs of biota (criterion (ii)) are also of intrinsic value.
* The marine component of the site – crucial to the evaluation of the universal value of the Solovetsky archipelago – is clearly not a cultural landscape.

* Thus, only criterion (iii) may be considered as a justification for nominating the site as a 'cultural landscape' referencing only the human-made landscapes. 'Exceptional beauty' is present in abundance both in the 'cultural' landscapes of the archipelago and in the natural ones.

Conclusion

All the conditions necessary for the renomination of the Solovetsky archipelago to a mixed class of the World Heritage List have been met. These conditions include the scientific feasibility report, the active development of the Solovetsky State Historical, Architectural and Natural Museum Reserve, which is responsible for the conservation of heritage on the Solovetsky Islands and restoration of the Spaso-Preobrazhensky Monastery, and the improvement of the social indices of the life of the local residents in recent years.

The natural elements of this unique complex are intimately connected to its cultural heritage, but they also have value in their own right. If we fail to acknowledge the true worth of these natural elements, the current imbalance of conservation priorities benefiting only its cultural heritage will continue. This, along with the increasing pressures of tourism, will lead to destruction, not only of a unique natural environment of the northern archipelago, but also the integrity of the complex and its globally recognized cultural heritage. Giving the Solovetsky Islands the status of mixed cultural and natural heritage will make it possible to eliminate this threat.

Participants in the renomination project

The developers of the documentation substantiating the renomination of the Solovetsky Islands with Adjacent Waters to the UNESCO World Heritage List are specialists from the White Sea Biological Station of the Lomonosov Moscow State University and the International Fund for Animal Welfare (IFAW).

In 2004 the folder for the nomination of Solovetsky Islands with Adjacent Waters to the List of World Cultural and Natural Heritage Sites was prepared in accordance with the requirements of the World Heritage Committee and the Operational Guidelines for Implementation of the World Heritage Convention (UNESCO, WHC-99/2, 1999, February). The materials have been considered and approved by the Ministry of Natural Resources and Ministry of Culture of the Russian Federation.

Specialists from the following departments and organizations, among others, took part in work on the preparation of the application to the UNESCO World Heritage Committee: the Ministry of Natural Resources of the Russian Federation; Institute of Cultural and Natural Heritage of the Ministry of Culture of the Russian Federation; Institute of Oceanology of the Russian Academy of Science; Union of Russian Bird Protection; Saint Petersburg State University; All-Union Institute of Nature Protection, Ministry of Natural Resources of the Russian Federation; Fund for Natural Heritage Conservation, Russian Federation; Greenpeace Russia; Belomorskiy Social-Environmental Center; Administration of the Solovetsky Region of Archangelsk oblast; Solovetsky Forestry Department, Ministry of Natural Resources of the Russian Federation; Northern Department of the Polar Institute of Fishery and Oceanology of the State Committee of the Russian Federation on Fishery (PINRO); Northern Landscapes (a private company); World Wide Fund For Nature Russian Programme Office; Laboratory of Ecology of Marine Benthos at the Palace of Scientific-Technical Creativity of Youth in Saint Petersburg.

Fig. 12 Kame field. Photo: A. Cherenkov [left page]

Fig. 13 Forest tundra. Photo: A. Cherenkov [left]

Fig. 14 Birds and the monastery. Photo: A. Cherenkov [right]

The cultural landscape value of the East Rennell World Heritage Site, Rennell and Bellona Province, Solomon Islands

Lawrence Foana'ota, Solomon Islands National Museum, Solomon Islands

Introduction

The aim of this paper is to provide information on the cultural landscape value of the East Rennell World Heritage Site in 1998. From the time the site was inscribed as a Natural World Heritage Site, its cultural landscape value has never been taken into consideration.

The paper begins with a brief history of the nomination process, and the preparation of the document used for the inscription of East Rennell as a Natural World Heritage Site. This is followed by information on the cultural landscape value and biological diversity of the site as far as the people of East Rennell are concerned. Finally the current conservation status of the site is discussed. Suggestions are made regarding the possibility of carrying out further research and documentation of the cultural landscape value of the site in order to fully appreciate the importance of conserving it.

Background

The Solomon Islands (Figure 1) is the first country in the South Pacific region apart from Australia and New Zealand to have a Natural Site inscribed under the World Heritage Convention. It was in 1989 that the Solomon Islands Government recommended Lake Tegano in East Rennell, Rennell and Bellona Province. Subsequently in 1992 the Solomon Islands became a member of the World Heritage Convention, assisted by the New Zealand Government.

In 1994 the New Zealand Ministry of Foreign Affairs appointed Dr Elspeth J. Wingham as a project manager to be based in Honiara, working with the Solomon Islands Ministry of Culture, Tourism and Aviation. Her main task was to prepare the nomination document for the East Rennell site, assisted by a national from the Department of Culture, Tourism and Aviation. During the preparation of the nomination document for East Rennell much of the data collected laid more emphasis on the natural, ecological and biogeographical beauties of the area than on its cultural importance.

East Rennell was nominated under all four criteria under the natural category as stated in the Convention. However the final decision of the World Heritage Committee was to list the area only under Criteria (ii)[1] of the Convention: that is, East Rennell is of world interest as an important site of bird evolution. This has been shown by natural history studies which have noted that Rennell's special birds are subspecies rather than full species.

Cultural landscape value of the East Rennell World Heritage Site

Rennell Island is 180 km to the south of Guadalcanal, the location of Honiara, the capital of the Solomon Islands. The island is 86 km long, with an average width of 10 km and an area of 840 sq km. The total area enlisted as a World Heritage Site is 370 sq km, while Lake Tegano covers an area of 155 sq km. The area known as East Rennell is demarcated from West Rennell by a line running across the island (see Figure 2).

The culture of the Solomon Islanders has been shaped and influenced over generations by their environment and its biological diversity. For example, knowledge of how to construct outrigger canoes developed because of the need to use a craft that could carry people, belongings, food supplies and animals across Lake Tegano and along its shores. This particular technology has changed over the years. The people no longer use paddle canoes, but have moved to single-hull canoes which use outboard engines. Some have completely switched from wood to fibreglass canoes.

The biological diversity in the area has also helped people to develop different skills and tools to hunt, fish, trap and exploit what is naturally available. This has led to their inventing different methods of preparing and cooking food, as well as determining the type of utensils required.

The skills and knowledge needed to choose the right size, shape and type of trees for making canoes, building houses and other structures developed because of people's needs, and these were, and continue to be, determined by the environment in which they live and roam.

The area contains a number of early settlement sites used prior to the population's eventual settlement in four

Figs. 1 and 2 Map of the Solomon Islands

Fig. 3 The East Rennell World Heritage Site

main villages located along the banks of Lake Tegano. It also features burial grounds – sites of cultural significance for the local community – and in particular sacrificial stone platforms.

The traditional knowledge of following the wave movements and the level of water in Lake Tegano and the sea indicates, to the fishing community or traveller, the direction of the wind, the season and the best time to fish, either in the lake or on the open sea. On occasions, these signs are interpreted to predict the weather, which determines whether people venture outdoors or stay at home. Depending on the water level in the lake people can tell whether it is low or high tide even without seeing the sea. People normally go out to fish when the sea is at low tide and stay at home when it is high tide.

The traditional use of Lake Tegano and the land, sea, forests and reef as the principal means for transportation, and as a source of food, medicine, and building materials for houses and canoes is still continuing today despite minor changes over the years to certain aspects of the natural environment. People still use water from Lake Tegano for irrigating their *taro* gardens.

Lake Tegano is seen as a natural and beautiful large volume of brackish water full of rare, unique and diverse life. People's knowledge of, and beliefs about, the lake are very much part of their lives. Hence much of the life it contains, especially the endemic sea krait snake (also called *Tugihono'ugi*), which is only known to live in fresh water in this part of Rennell Island, is seen and treated with great respect by the people.

The traditional practice of using water from the lake to soak a fruit, known in the local language as *paipai*, to remove its bitter taste and make it edible still continues today. This type of fruit is only eaten at a special time of the year. This same method is applied in removing poisonous starch from a particular yam called *soi* in order to make it edible. People use driftwood for building their houses in the lake, in order to preserve them.

A customary method of fishing, using a net known as *hanga* to catch a fish known as *pagavu* and eel (or *upo*) has already ceased, and the knowledge needed to make this particular type of net has been forgotten by today's young people. This change has come about because of the introduction of modern fishing nets into the area by some people.

People in the area can usually predict that dry weather can be expected for the next two or three days if cold air comes from Lake Tegano at night. When large flights of birds are seen in the lake area, a strong wind is present beyond the island and people should prepare themselves. People also know that when large numbers of eel emerge in the lake it means that the west wind has destroyed their hiding places in the rocks. When a particular type of bird called *suasuanighai* – of the same family as herons – is seen in large numbers on land, it indicates that there is a depression not far off the island and so people should expect bad weather soon.

Movements of coconut crabs on land usually indicate the best time to catch them and the months of the year when they are available. For example, they are seen moving from land towards the sea to lay eggs from August to December. During these months people might decide to catch some of them and let others go as a method of conserving the crab population. After they have laid their eggs and returned inland, which normally occurs between January and July, they are sometimes regarded as not containing as much meat. The crabs change their shells once a year as they grow, which normally takes place in March and April, and people know that during this time of the year it is very difficult to catch them because they usually bury themselves deep in the ground and rock crevices until their skeletons are hard.

Current influences and conservation status of East Rennell World Heritage Site

The World Heritage Site was kept intact until the extension of a road from Lavangu in the west to the Lake Tegano in 1995, during the building of which a number of timber trees were felled. They were used for rebuilding houses that had been damaged by cyclone Nina.

This road has not greatly affected the status of the site, although it has had the marked effect of opening up the area to the rest of the inhabitants of the island. People now travel frequently to the area in vehicles owned by those living in the eastern and western parts of the island.

The introduction into Lake Tegano of fibreglass canoes powered by outboard motor engines has changed people's attitudes towards the use of the outrigger canoe. To own and operate a fibreglass canoe powered by an engine is regarded highly by people in the area (Figures 4 and 5).

This method of transportation has affected the way people travel from place to place. It has made travelling easier and faster, but it is also becoming expensive because in the past people use to travel freely but now they have to pay fares to go from place to place, either in powered canoes or in road vehicles.

Although the use of outboard motors on the lake has not threatened the wildlife, and pollution is still not a major issue of concern in the area, it is important to start to address any potential threats now rather than wait until it is too late. The use of outrigger canoes on the lake should be encouraged more, so that the skill and traditional knowledge of canoe building is maintained. Currently this knowledge is disappearing as a knowledgeable but elderly generation pass away.

The use of modern fishing nets in the lake is also an area of concern because it can lead to overfishing, which is causing changes to the lake ecology. At this stage this

method of fishing is still being used only by a handful of people who have managed to acquire the nets. Spear fishing and snorkelling are still being practised. These have the great benefit that only the right sizes and small numbers of fish are caught at any one time.

On land the use of firearms to shoot birds and other animals has changed the way people hunt. In the past people used nets and traps to catch birds and other animals, and consequently the number of birds killed at any one time was kept under control. This change in hunting methods has caused some concern because bird populations have been decreasing slowly.

One of the main ways in which the use of firearms has been controlled, not only in East Rennell but throughout the whole country, occurred when the Regional Assistance Mission to the Solomon Islands (RAMSI) arrived in 2003 to assist with the restoration of law and order after almost five years of ethnic conflict. It introduced a system whereby all guns had to be registered, and those not legally registered were collected and destroyed. This action helped the conservation of wildlife throughout the country, but it caused problems with pest control in certain parts of the islands. For example, increased numbers of crocodiles, wild dogs, pigs and other animals and birds have threatened to destroy people's gardens and lives. Conversely, in East Rennell this action has helped preserve the limited number of birds and increase their numbers.

The migration and frequent movement of people from the East Rennell area to urban centres such as Honiara and to other provinces has eased the population pressure on the environment and natural resources, as well as the pressure on land use on the island.

The acquisition and arrival of a new ship for Rennell and Bellona Province, from Japan in May 2005, allow more people to travel between the islands and opens up new ways to develop other activities such as tourism. Visitors are able to visit the East Rennell World Heritage Site more easily than in the past, and also more resources may be exploited, especially the coconut crab (*Birgus Latro*), which used to be very popular in restaurants and in the principal market in Honiara, the capital.

Even though people use canoes with outboard engines, they do not use them frequently. This is mainly because there is a limited amount of fuel available at any one time in the area. As a result it is very expensive. Currently, travelling to the island and going from the west, where the airport is, to the World Heritage Site on the east is very expensive and at times unreliable. The frequent cancellation of flights to the island and the breakdown of the only vehicles operating between the villages on the east and the west of the island are some of the contributing factors to the high costs of travelling on the island.

Rennell Island is geographically isolated so the influence of large-scale developments is not an immediate threat to the environment or life in general. But this situation may change in the not too distant future, especially with the introduction of frequent shipping services between the islands which started in 2004. Including the limited human activities, most damage and destruction to the environment on the island is caused by natural disasters such as cyclones, which occur almost every year.

In recent years people have started to use modern building materials like corrugated iron sheets, galvanized iron posts and cement in house construction. The use of septic tanks for sewerage by families living in permanent houses and the operators of small resorts built along the banks of the lake are some of the artificial features that have started to influence and change the integrity of the landscape (Figure 6).

The land and forests provide clues as to the best time to hunt or fish. For example, when a certain tree in the forest blooms it usually indicates that a particular fish will be or is in abundance, and people will thus go and fish.

Figs. 4 and 5 Fibreglass canoes in the community

The lake, land and forests are sources of knowledge, inspiration and life to the people. Hence, to them, culture and nature are inseparable.

Conclusion

To conclude, it is obvious from this report that East Rennell's natural and cultural landscapes and biological diversity are still very much intact despite some of the changes that have taken place as a result of both human and natural events and activities in the area over the years.

This status has been mentioned because the people of East Rennell regard culture and nature as interrelated, and to destroy one would mean losing both. The future integrity of the cultural and natural heritage of East Rennell depends very much on the lifestyle chosen by those currently living in the area and what they want for themselves and future generations. The decision to maintain the current conservation status of the area can only be made and achieved by the people themselves, with professional advice from experts.

It is important that we are reminded of the fact that the sources of knowledge, skills and livelihood that the people of this area continue to enjoy and maintain over the years in this particular part of the island have come about because of the contributions and inspirations imparted to them by the natural and cultural landscapes and biological diversity found in the East Rennell World Heritage Site.

Therefore, it is suggested that the cultural landscape value and biological diversity of the East Rennell World Heritage Site should be researched and documented further, and if possible it should be considered for inclusion under the concept of Cultural Landscapes in the World Heritage Convention.

Acknowledgements

The maps shown as Figures 1 and 2 were obtained from, and are reproduced by kind permission of, the Nomination Document of East Rennell, 1997.

Photographs of the different scenes in the East Rennell area are by courtesy of Salamat Tabbasum, Associate Expert, UNESCO World Heritage Centre in Paris, France. They were taken in late April 2005 during an evaluation mission to the East Rennell World Heritage Site.

Personal communications and interviews with the following people were carried out in early March and June 2005:

Chief Newman Tegheta, East Rennell

Geoffrey Hati Kaitu'u, Tegano Lodge, East Rennell

Lance Tago, Kai Koe Lodge, East Rennell

Note

1. Criterion (ii) requires sites to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town planning or landscape design.

References and further reading

Foana'ota, A. L. 2004. A *Report on the Mission to East Rennell World Heritage Site, Rennell and Bellona Province, Solomon Islands, May 2004*.

Fowler, P. J. 2003. *World Heritage Landscapes, 1992–2002*. Paris, UNESCO World Heritage Centre.

Pearson, M., and Sullivan, S. 1995. *Looking After Heritage Places: The Basics of Heritage Planning for Managers, Landowners and Administration*. Melbourne, Melbourne University Press.

Wingham, J. E. 1997. *Nomination of East Rennell, Solomon Islands for Inclusion in the World Heritage List – Natural Sites*. Christchurch, New Zealand, Larcombe Print.

Fig. 6 Development along the lake

Fig. 7 Women in Tegano

Environment, development and poverty eradication with special reference to globally important and ingenious agricultural heritage systems (GIAHS)

Maharaj Muthoo, Roman Forum, Italy

Summary

Awareness is growing about the environmental, economic, cultural and social importance of scientifically sound management of farms, fisheries, forests, water, biological diversity and related renewable resources. In this context, an intensive global dialogue is warranted for promoting and reinvigorating sustainable agriculture and rural development (SARD) and the concomitant Globally Important Ingenious Agricultural Heritage Systems (GIAHS). But the costs and means are beyond the capacity of most developing countries. Measures need to be taken to institute and implement appropriate policies, programmes and projects for the valorization of long-standing traditional farming practices and ever-evolving resilient agricultural systems, to provide compensation for the related environmental services, and to get farm products unhindered to retailers and consumers.

Strategic vision is required to convert this challenge into an opportunity by creating synergies among multilateral agreements, enhanced international cooperation, private–public partnerships, and national policies conducive to the sustainable management, conservation and development of GIAHS, for benefit-sharing between local communities and other stakeholders, and for recognizing the inherent comparative advantage of eco-agriculture and related services in the globalization process. Towards this end, the paper provides an extensive background of the global environmental movement, and its role and relevance for sustainable development in general and for SARD and GIAHS in particular.

It concludes that economic incentives, poverty eradication and good governance are essential conditions for ensuring the sustainability, diversity and richness of GIAHS, and vice versa. Otherwise the priceless and sacred human heritage of GIAHS is at the risk of being diluted, degraded and lost irrevocably. This challenge is reflected in an addendum of an arbitrary declaration about the resolve of the international community to manage GIAHS for the sake of the earth's cultural and biological diversity and for sustainable livelihoods and well-being worldwide.

Introduction

It has been pointed out that a number of summits and conferences on global environmental and developmental issues have produced more hot air and printed paper than action. This has made it increasingly difficult for any individual to absorb more than a fraction of the available material, so we are all in danger of understanding only one limb of the elephant and overlooking the whole picture. Hence the need to remind ourselves how we arrived at the Rio and Johannesburg summits, and what has happened as a result. This paper attempts to provide an abridged account of the evolution of the most salient issues for sustainable agriculture and rural development, with special reference to GIAHS and related issues, and particularly of poverty eradication.

From Silent Spring to Stockholm

The growing awareness of the environment gained momentum during the 1960s. The awakening of a new environmental consciousness, often attributed to Rachel Carson's *Silent Spring* (2000), catalysed an unprecedented concern about the damage that humankind was inflicting on nature, for example through the unbridled use of pesticides. The 1972 publication of the Club of Rome's *The Limits to Growth* (Meadows et al., 1972) proclaimed that population increase and concomitant consumption could not be sustained in view of the limits of the earth's resources.

The environmental conservation movement received its international sanction at the United Nations Conference on the Environment held in Stockholm in 1972. Apart from linking poverty with environmental concerns – as in Indira Gandhi's keynote address highlighting the 'pollution of poverty' – the Stockholm Conference established the 'polluter pays' principle. Among the often nebulous definitions of the goal of sustainable development, perhaps the pithiest is of the perspective 'to meet the needs of the present without compromising the ability of future generations to meet their own needs'. If that is to be respected, SARD should receive highest priority, with GIAHS as one of its main landrovers.

Our Common Future, biodiversity and the GEF

The World Commission on Environment and Development established in 1983 published *Our Common Future* (1987). Sustainable development, it said, is a process 'in which the exploitation of resources, the direction of investments, the orientation of technological and institutional change are all in harmony and enhance both current and future potential to meet human needs'. It recognized the interrelatedness of environmental protection and economic growth, and legitimized proposals for environmental financing mechanisms. But it did not refer explicitly to the back seat to which GIAHS were being relegated for want of appropriate incentives for their stewardship.

The Montreal Protocol in 1987 provided the first platform for finding ways to finance the phasing out of chlorofluorocarbons, identified as responsible for the depletion of the ozone layer. Increasing international concern over the environment during the later part of the 1980s, particularly about global warming, led to the recognition that costly corrective and preventive measures were necessary. This in turn required mechanisms for environmental funding and inspired the launching of the Global Environmental Facility (GEF) in 1991. It concentrates on five focus areas, among which SARD and related GIAHS issues generally fall within the biological diversity theme, though there should be scope also in relation to the global warming and land degradation themes, the latter involving the recently included GEF programme for combating desertification.

Rio Earth Summit and Agenda 21

The United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, convened in Rio de Janeiro in 1992, elaborated 'strategies and measures to halt and reverse the effects of environmental degradation in the context of strengthened

national and international efforts to promote sustainable and environmentally sound development'. It offered Agenda 21 as a blueprint for socially, economically and environmentally sustainable development. It challenged prevailing policies which deepen economic divisions within and between countries, which increase poverty and hunger worldwide, and which are causing the deterioration of the ecosystems on which we depend for life on Earth. It emphasized that sustainable development has the potential to reverse poverty as well as environmental deterioration. It aims at strengthening the role in sustainable development of indigenous people, of women and youth, of farmers and workers, and of non-governmental organizations (NGOs) and the private sector.

UNCED estimated the average annual costs of financing its targets at over US$600 billion through 2000, including US$125 billion on grant or concessional terms from the international community. Neither these figures nor the target that developed countries should commit 0.7 per cent of their GNP to official development assistance (ODA) have been

Fig. 1 Traditional rice terraces in Indonesia [left]

Fig. 2 Central Cordilerra in the Philippines [right]

attained. Persistent poverty is contributing to accelerated degradation of natural resources, particularly biological diversity, topsoil, freshwater, and marine fish stocks, which are being used beyond their regeneration rates.

Other sustainability summits and conferences

After the Rio watershed, among the notable summits and conferences were:

* The Human Rights Conference in Vienna in 1993. It highlighted the crucial links between development, democracy and the promotion of human resources. This should include the rights and privileges of remote rural communities, landless labourers and indigenous groups, which are often neglected, causing their deprivation and the degradation of their farms, forests and natural assets. The Bishkek Summit in 2002 called for the rights of mountain communities, a reduction in their poverty and the sustainable management of mountain ecosystems, especially their biodiversity and water towers.
* The Population Conference in Cairo in 1994 aimed at the integration of policies, programmes and population concerns for achieving sustainable development. Rural poor, pastoralists and tribal groups are among those most deprived of reproductive health care, highly vulnerable to food insecurity and unbridled breeding, rarely in harmony with the carrying capacity of their drylands, mountains, rainforests, small farms and fragile ecosystems.
* The Small Islands Conference in Bridgetown in 1994 set a strategy to build on Agenda 21, focusing on fifteen key areas, including natural and environmental disasters, fresh water, land resources, energy, tourism, biodiversity, climate change and sea-level rise.
* The Social Summit in Copenhagen in 1995 sought the eradication of poverty, expansion of gainful employment and social integration. Poor agricultural and rural communities are far more vulnerable than others to natural hazards and risks, remoteness and inaccessibility. Measures are required to bring them into the mainstream of society and to compensate them for their environmental and other services unrecognized by the market, such as of outdoor recreation, ecotourism, carbon storage and germplasm for agro-biodiversity.
* The Beijing Women's Conference in 1995 focused on the cross-cutting issues of gender, development. Women in agriculture-dependent communities undertake arduous unpaid activities, such as composting and fuelwood gathering, and eke out existence as virtual widows, while their menfolk are away in city slums in pursuit of elusive jobs. Special attention is required for their empowerment and gainful employment. That can be based on SARD and GIAHS initiatives, for example to develop indigenous herbal and horticultural products, spices and bush meat, bamboo handicrafts, locally adapted sheep, goat and other livestock products.
* The City Summit in Istanbul in 1996 addressed the issue of city slums and produced the Habitat Agenda with regard to the environment, human rights and social development. Peri-urban agriculture and urban tree groves can be sources of products for meeting the needs of the urban poor and for improving the quality of environment for all urban dwellers.
* The Food Summit at Rome in 1996 adopted the goal to halve by 2015 the number of hungry people. The Five Year After Summit in 2002 concluded that the goal was unattainable unless specific measures were taken. More recently, the interrelationship between agro-biodiversity and food security is being better understood, taking note of diverse natural foods, the biodiversity base for food and farm products, and the role of sustainable agriculture and rural development in preventing land degradation and conserving soil and managing watersheds. Eco-agriculture should receive heightened attention for augmenting sustainable food supplies, as should the need for ensuring that nature and farming complement each other, and for conserving natural assets, especially in fragile landscapes and marginal agricultural areas.

Monterrey and the Millennium Summit

About half the world's people live on less than US$2 a day. Their traditional knowledge is being eroded while modern science, technology and know-how are beyond them, both in their homes and on their farms, in forests and sweat shops. Keeping this in view, the Millennium Summit held in September 2000 in New York adopted the Millennium Declaration to address poverty and sustainable development. It set targets for 2015, notably to reduce by half the proportions of people who are living on less than US$1 a day (1.2 billion), who suffer from hunger (800 million), and who do not have access to safe drinking water (1 billion).

The Summit resolved to protect 'our common environment', for which 'Peoples, as well as governments, must commit to a new ethic of conservation and stewardship and demonstrate global solidarity.' Among the first steps, it resolved to (i) stop the unsustainable exploitation of water resources, (ii) make every effort to ensure the entry into force of the Kyoto Protocol and to embark upon the required reduction in emissions of greenhouse gases, and (iii) press for the full implementation of the Conventions on Biological Diversity and Combating Desertification.

The Millennium Development Goals (MDGs) and other commitments of the Rio and related summits require increased investment, above all for poverty eradication and sustainable livelihoods. There was a consensus at the

International Conference on Financing for Development, held in Monterrey in 2002, about the need for almost doubling donor assistance to around US$100 billion a year just to meet the MDGs. That would be about 0.5 per cent of the GNP for developed countries, still well below the 0.7 per cent target agreed upon years earlier.

Johannesburg Summit

The World Summit on Sustainable Development (WSSD) at Johannesburg in 2002 agreed to pursue the Rio Principles that the protection of the environment and social and economic development are fundamental to sustainable development. It in essence recognized the challenges of:

* poverty eradication, changing consumption and production patterns, and protecting and managing natural resources for promoting sustainable development
* continued deterioration of the global environment, as evidenced by desertification and the depletion of biodiversity and fish stocks, by climate change and frequent natural disasters, and by air, water and marine pollution
* globalization, whose benefits and costs are unevenly distributed, with developing countries facing special difficulties for sustainable development.

The Plan of Implementation of the WSSD (POI) identified priority areas for implementation as:

* poverty eradication
* protecting and managing the natural resource base of economic and social development
* globalization challenges and opportunities for sustainable development
* finance, trade and technology
* institutional framework for sustainable development.

The POI has reiterated the MDGs, and includes the development of framework programmes in order to promote social and economic development within the carrying capacity of ecosystems, while improving efficiency and sustainability in resource use. This involves common but differentiated responsibilities of states in cleaner production and eco-efficiency, enhanced corporate environmental and social responsibility and accountability, public–private partnerships, and an increased role for the GEF in supporting and strengthening green production and consumption programmes. SARD and GIAHS must be recognized as major pillars towards this goal.

Managing the natural resource base harmoniously calls for targets to achieve integrated management of agriculture, water, land and living resources. This priority area calls for the conservation of biodiversity and fragile ecosystems including traditional farming systems, mountains and deserts. It seeks an inclusive approach to address vulnerability, risk and disaster management, and urges action on the issue of climate change.

The key outcome of WSSD is WEHAB: that is, Water, Energy, Health, Agriculture and Biodiversity. It is a framework for focusing on five priority areas for action. The two latter priorities are attainable through SARD and GIAHS, for which a global framework is warranted. Agriculture is an issue not only for promoting sustainable rural development and ensure food security, but also to deal with the problem of land degradation, which affects two-thirds of farmland worldwide. Mountain ecosystems are increasingly threatened, desertification is intensifying and spreading, and productivity is declining sharply, while the number of mouths to feed continues to grow, with millions recurrently facing the spectre of starvation. The resources for combating desertification have hitherto been miserly, but its inclusion as a GEF focal area should give a boost to combating desertification and rehabilitating drylands for improved productivity, involving sustainable agriculture and water harvesting as priority areas.

While SARD should contribute to the conservation of biological diversity, the summit explicitly recognized that biodiversity plays a critical role in overall sustainable development and poverty eradication. This is also linked to food security, the conservation of fragile ecosystems, and the sustainable livelihoods of the poor, for which GIAHS is a perfect lever.

Aid, trade and global governance

Sustainable development in a globalizing world is beset with challenges, particularly among the poor and powerless communities. The removal of trade barriers and improved terms of trade – which recognize developing countries on the basis of their inherent comparative advantage in their eco-agricultural practices – would institute a more harmonious background for good global governance, environmental management and sustainable development. Hence, the need *inter alia* to implement the outcomes of the Doha Declaration (on trade between nations) and to draw upon the GIAHS initiative.

Economic instruments could help to lead to sustainable agriculture and effective GIAHS frameworks, provided that trade and markets are harnessed in a holistic manner, with strategies and policy enforcement measures for complementing market mechanisms which otherwise fail to account for cultural diversity, ecosystems, and environmental and social services. For example, carbon sink and sequestration schemes should seek to mitigate global warming, by a reduction in land degradation and deforestation and by eco-agriculture. In this context, the Clean Development Mechanism of the Kyoto Protocol

should include safeguards to avert risks to local livelihoods and provide incentives for social benefits from appropriate SARD projects. The pioneering work of Eco-Securities and research, for example about soil and plant carbon sequestration, at the University of Tuscia among others, needs to be supplemented and complemented in order to provide hard data about defining the scope, nature and place of healthy soils, poor local communities and SARD in the emissions trading process. The growing threats of global warming and greater loss of biological diversity increase the likelihood that developed countries would be willing to consider compensating communities in developing countries for such environmental services as carbon sequestration, biological diversity and other conservation concessions.

Capturing emerging opportunities by removing the barriers to market entry of GIAHS and eco-agricultural products is another aspect of SARD, especially important for poverty reduction of the developing countries and communities. It is needless to reiterate that certification for SARD however may be perceived as a non-tariff barrier in most of these countries, so that it so far remains a tool largely in the hands of the North. Regarding the economic and social importance of international trade in farm products, which amounts to billions of dollars, it may be noted that the revenues from such trade are essentially concentrated in the richest countries of the world.

Daly and Farley (2004) argue against globalization versus internationalization. There is a need and scope for the reconciliation of the two, provided appropriate global institutions are created and put in place. Apart from the issue of mitigating climate change and combating carbon emissions, the concomitant SARD paradigm provides a principal practical testing ground for the purpose.

Globally, the negligence and replacement of GIAHS and SARD must be construed as deleterious to the earth's environment. But how can conservation be justified in the face of economics at the local level, where the choice is to draw upon vast tracts of apparently low-producing land for ranching, cash crop and industrialized food production, or for the settlement of landless millions? An example is the push effect from poverty-ridden dry north-east Brazil to the neighbouring rainforest in the Amazon, with well-known consequences. Leaving large areas under tropical trees for providing 'primates and oxygen' for the rest of the world to enjoy cannot be ensured unless the global economy puts these products on to the market with values at least equal to the immediate gains to the proprietors and the public from deforestation. Such economic valuation does not take place.

Measures and means need to be instituted to provide proxies to the market in a mutually beneficial manner, if the global community is indeed poised for the sustainable management and conservation of the biodiversity-rich GIAHS sinks. Call it international subsidies or swaps or by any other name, the payment for ecological services is catching up, and there is no reason that these can not become a part of the process for good global governance in support of SARD and GHIAS. An union between 'polluter pays' and 'beneficiary pays' principles, and between ecology and economics, is needed, with due consideration of social and cultural values.

Global recognition of the role of SARD is warranted in the context that it can contribute to MDGs and poverty reduction through gainful employment and income generation, to sustainability by preventing the overexploitation and degradation of biodiversity, and to ethical trade. Finance, trade and technology are noted as being among the effective means of implementation of Agenda 21. It is never too late to call for the delivery of these means by all the countries concerned, taking into account the Rio principles, and urging the developed countries that have not done so to make concrete contribution towards the target of 0.7 per cent of GNP as ODA. That is in the mutual interests of North and South and of overall sustainable development as part of the ongoing globalization process. It includes the need for an action-oriented global mechanism for promoting SARD and GIAHS worldwide, especially in the vulnerable developing countries.

A Global GIAHS Fund

The Millennium Summit has resolved to intensify our collective efforts for SARD. One of the challenges facing the world community is to combat the degradation and destruction of GIAHS and the concomitant loss of the earth's richest biodiversity resource, and to create mechanisms for their sustainable management and conservation in developing countries. Most of these countries are however beleaguered by poverty, disparities and debt, and their GIAHS sites are at risk. The burden of debt servicing and repayments not only pre-empts potential opportunities for investment in adaptive GIAHS conservation and sustainable management, but the traditional farmland is seen as a source of green gold to deal with today's pressing plight. There is an immediate need not only for a global GIAHS funding mechanism to embody debt-for-nature swaps, but also to adopt sector-wide approaches (SWAps) for harmonization and donor cooperation regarding the priority requirements of the needy developing countries.

In the traditional farming, eco-agriculture and land-dependent rural communities of the South, there are about 890 million people with an income of less than US$1 a day. The people living in and around these communities include tribal people, indigenous groups, nomads, family farmers, small entrepreneurs, shifting cultivators, pastoralists, and jobless and landless rural people. They are among the most powerless and disenfranchised, and often they witness unsustainable natural resource extraction with almost no benefit in sustaining their lives. They are 'low-productive'

land-dependent communities vulnerable to violence, disease and hunger, and comprise a large number of ecological and economic refugees.

It must be recognized that poverty eradication, good governance and sustainable land management are mutually dependent and reinforcing. This gives clues to innovative financing mechanisms, which need not be restricted to SARD *per se*. With a holistic approach to the environmental, social, cultural and economic dimensions of sustainable agriculture, financing for GIAHS should become available from the increasingly important poverty reduction and sustainable human development programmes. In support of this, capacity should be created for those concerned with agriculture and sustainable development to present their proposals in a cross-sectoral context, both to international donors and to national and local authorities.

This calls for a global vision with local action in a multidisciplinary manner, with synergies among institutions and stakeholders concerned about the security of the planet. A Global GIAHS Fund (GGF) is proposed to combat the irrevocable loss of GIAHS and to create an enabling environment for the conservation and management of the remaining GIAHS by simultaneously reducing the poverty and vulnerability of the poor farming and land-dependent communities. Resources for the project portfolio to be financed through GGF can be drawn not only from the environment, poverty reduction and rural development programmes of multilateral and bilateral donors and international financial institutions (IFIs), but also from enlightened foundations, NGOs and other civil society stakeholders. Collaborative partnerships and alliances may be established with them and other players interested in the issues of GGF or complementary with its goals and objectives. Examples are GEF, the UN Convention to Combat Desertification (UNCCD), the UN Development Programme (UNDP), the UN Environment Programme (UNEP), UNESCO, the Food and Agriculture Organization of the UN (FAO), the International Fund for Agricultural Development (IFAD), the World Bank, regional development banks; and the World Conservation Union (IUCN), Friends of the Earth (FOE), Greenpeace, the Sierra Club, Conservation International, Nature Conservancy, OXFAM, Actionaid; or Novartis, Syngenta, the Ford and Rockefeller Foundations, or academic institutions and centres of excellence in pertinent subject matters, including the World Business Council for Sustainable Development (WBCSD) – and why not the WWF?

With heightened awareness among consumers – which the GGF should aim to promote, among other things – about the prevailing unethical trade in farm products, about the impact of unscrupulous industrial agriculture, mining and oil exploration, and inappropriate infrastructure projects in fragile ecosystems, GGF should be attractive to the private sector in view of the emerging ethos of corporate social responsibility. This may be linked to certification as a market tool for sound farm practices and sustainable management, importantly noting that foreign direct investment in developing countries and emerging economies is many times that of ODA. In view of the recent resolve of the international coalition, the donor fatigue of the 1990s should soon be replaced by a reinvigorated flow of aid and trade for benefiting the poor in order to stem disparities, to build an overarching solidarity to safeguard the rich cultural and biological diversity that GIAHS upholds. It thus is not far-fetched but instead seems feasible and essential to launch a revolving fund of US$2 billion in support of GIAHS for promoting SARD and poverty alleviation.

Sustainable GIAHS management and poverty reduction

Foremost among the reasons that can be mentioned for launching a US$2 billion benchmark global GIAHS Framework Fund, for promoting sustainable agriculture and natural resources management in developing countries and those in transition, is the priority to alleviate persistent poverty on the planet by harnessing the GIAHS resource assets for providing alternative livelihoods for the poor, particularly rural communities, which continue to be neglected. That will concurrently help stop the destruction of the earth's biodiversity, given that their material products and ecological services are severely threatened. This cannot be attained without first involving all stakeholders, especially those who are directly afflicted, in decisions about land use and putting the public interest first.

Rather than taking the poor GIAHS people for granted, as has been the case thus far, there is need to consider GIAHS as a priceless asset of people in the context of 'planet and people', to valorize GIAHS assets, and to place the correct price and value on products, which reflect their full ecological, cultural and social values. This would include compensation to communities and countries for their stewardship of the GIAHS resources for the good of society, say through carbon sequestration for mitigating climate change and for ensuring sustained supply of the earth's fresh water. Such recognition would make it meaningful to plan for the use and protection of whole landscapes, not merely some GIAHS sites in isolation. This also signals the need for making use of traditional knowledge about GIAHS ecosystems, and expands the information base, while intensifying research and development for innovative interdisciplinary approaches to the issue. But bold political decisions, reinvigorated farm leadership institutions and large-scale sustained investment are essential pillars of the architecture for making sustainable agriculture a reality.

The Sala-i-Martin versus World Bank debate may raise some questions about the intensity of world poverty, but

there is no doubt that the developing country eco-agriculture-dependent communities form the bulk of those living below poverty line, and that they are highly vulnerable to hunger and malnutrition. The sustainable management, conservation and utilization of GIAHS resources could be one of the major socio-economic developments of this century. That needs to be intertwined as part of the poverty reduction strategies and related MDGs, by both national leadership and the international community.

GIAHS can be vital safety nets, helping rural people to avoid, mitigate and rise out of poverty. This function is unknown to many policy-makers and planners because it is not well understood or explained. One reason is that the contribution of GIAHS to poor households is largely unrecorded in national statistics, as most of it is for subsistence or for trade on local markets. In addition, most wealth from GIAHS sites goes to better-off segments of society, while some aspects of the access to and processing of GIAHS resources and products often inhibit their potential to assist marginalized people. Despite these obstacles, the contribution of GIAHS to poverty alleviation can be increased, provided that decision-makers recognize and act on this potential.

GIAHS-based poverty alleviation calls for preventing GIAHS from shrinking, making them accessible and redistributing resources and rents, ensuring their risks and challenges, and increasing the value of family farm production, for which there is so much untapped potential in most of the developing countries. This applies also to countries with deserts, drylands and low vegetal cover, where large-scale re-greening through multi-purpose crops can contribute to both the environment and sustainable livelihoods, as is the case in the Sahel and elsewhere.

It is also recognized that, in examining the GIAHS–poverty relationship, there is a need to consider all types of disadvantaged people, irrespective of their level of poverty and whether they are landless or have access to land. Even small differences in the level and type of household assets influence how these people use their local resources. Further in-depth study needs to be done in order to shed light on this question. A critical role for such research is to clarify where biodiversity conservation and poverty alleviation converge and where they diverge as policy goals. Suffice it here to state that SARD and GIAHS in line with optimal land use can contribute to combating poverty. That is in the self-enlightened self-interest of developed countries, many of which are dependent on imported biodiversity services, including a healthy global environment.

Poverty and population increases in developing countries are among the forces propelling the destruction of GIAHS, for example through overgrazing and conversion to mono-agriculture, often of an unsustainable subsistence nature, with ensuing land degradation and salinization of soils. Some transitional land-use options, such as complex agro-forests, tree crop plantations and scattered trees on farmland, can potentially assist with poverty alleviation while conserving biodiversity. However, win–win opportunities must be well researched and identified, and trade-offs must be made to prevent GIAHS from disappearing. That is because permanent clearing means losing the safety net and local income-generating functions of GIAHS. At the global level, possible checks on further GIAHS clearing include the consequences of a diminished capacity for carbon sequestration and the loss of habitat and biological diversity.

Moreover, many poor people, even though they live in and around small traditional farms, are excluded from access to their natural wealth because they lack power, while powerful outsiders are attracted by the high value of special products and take advantage of poor governance. In many countries, land tenure, laws and regulations were designed on the one hand to ensure state control, with 'licence-holders' and outsiders being granted privileged access, and on the other hand to avert interference and counter-appropriation by the rural poor. Only in recent years has this begun to change, but power broking still prevails.

Local community management of GIAHS and SARD by smallholders can alleviate poverty, but significant obstacles have to be overcome, such as for leasehold land in Nepal and for community plantations in Senegal, both of which offer model examples, but only after persistent international backstopping and national policy support. Normally, community ownership is hampered by weak and slow-changing institutions, rent capture by local élites, inconsistent laws and regulations, and cumbersome bureaucracy. In addition, communities lack control of downstream activities, and much of the rent is captured by those involved in processing and marketing. Yet the safety net and poverty-trap aspects of GIAHS are linked, inasmuch as the features that make them attractive to the poor also limit their potential for generating increased income. The key issue is how to preserve the role of GIAHS as safety nets in locations where they are more than dead-end poverty traps and where other forms of social insurance cannot take their place.

Reduction of poverty in general, and of that of poor GIAHS-dependent communities in particular, can be pursued through policy reforms explicitly linking SARD and GIAHS with this goal. Such a strategy should include the establishment of a people-centred agenda; removal of tenure and regulatory restrictions; improvement in marketing arrangements; creation of partnerships between poor people and farm enterprises; redesign of transfer payments; and the integration of GIAHS-based poverty alleviation efforts in land-use, rural development and poverty reduction strategies. GIAHS is and can be in the best interests of the poor people, for it is they who depend heavily on traditional agriculture and stand to suffer the most from its disappearance and degradation. Corporate social responsibility, good governance,

equity and social justice must be raised as other reasons for the sustainable management, conservation and development of GIAHS as an essential element of SARD.

Sustainable GIAHS management policy and practice

SARD in the South remains an economic policy issue more than anything else, particularly in the face of prevailing poverty. Long-term global and local environmental and sustainability concerns are emerging, but international and national policies are hardly ever backstopped commensurably. In the absence of effective economic and financial incentives, agricultural heritage conservation could be part of law enforcement, but that is bound to have limited impact on its own. Unless GIAHS are considered as sacred, as they indeed are for sustainable livelihoods, for which reason they should be valorized and conserved, sustainability of the GIAHS will continue to diminish, for in practice not much has changed on the ground in spite of the sustainable agriculture policy pronouncements.

The economics of sustainable and environmentally sound development call for the computation of costs and benefits associated with alternative environmental policies. Such evaluation criteria bring into focus the opportunity cost of continued environmental degradation through the uninhibited pursuit of economic growth. In the context of poor developing countries, it is observed that poverty and environmental degradation are mutually reinforcing. Yet decision-makers cannot easily be persuaded to allocate scarce resources for sustainable environmental management. Their priority concerns of feeding, clothing and housing increasing populations have a greater immediacy, even though the methods might be unsustainable, such as through lopsided industrial agriculture. Considerations of conservation and environment do not have the same immediacy for them. While multifunctional farm areas have increased in the affluent industrialized countries, GIAHS sites continue to be cleared and occupied by the landless and jobless in developing countries for meeting their subsistence needs. These are among the main reasons 'why poverty, not affluence, is the environment's number one enemy'.

The issue of property rights and responsibilities needs to be tackled upfront to ensure sustainable stewardship of GIAHS at the local level, apart from interactions in the context of global commons and transboundary impact. In the absence of 'well-defined and secure property rights', mutually beneficial transactions may fail to occur and value-enhancing investments may fail to be undertaken. That is precisely what is happening in and around most of the world's GIAHS sites. It is not surprising when there is no assurance about the basic rights of individuals or organizations to the fruits of their labour. It is this inherent connection between economics and law that is often ignored in promulgating codes of practice. Thus legal incentives are lacking to promote sustainable agriculture by local stakeholders, and the marketplace has yet to develop trading practices for the environmental and social services of such management, nor are there free-market institutions that could compensate and recognize them, save some instances regarding carbon emissions. At the same time, the governments could help monitor information about such products and services that purely property rights and traditional markets might not provide, but 'decision-makers in government agencies often fail to see the big picture' and merely 'good intentions can lead to bad results', as these may be based on activist pressures or similar considerations. This also calls for integrating GIAHS and related natural resource assets into national accounting systems and for instituting reasonable valuation frameworks for GIAHS resources.

Another major impediment in most of the developing countries is the limited capacity and lack of an enabling environment for effective implementation of sustainable agriculture and related codes. The availability of skilled personnel at all levels is essential to convert good intentions and policies for GIAHS into action. This would often involve the training of trainers in leadership, good natural resource management, conflict management and the formulation and implementation of codes of practice. Increased budget allocations are required to build up and maintain institutional capacities, and international assistance is warranted, at least initially. But far more is required in this context, in a holistic and coordinated manner and on a priority basis. It would be buttressed by market incentives for GIAHS farm products derived from sustainably managed land, water and biodiversity resources under systems of agreed codes of practices.

Constraints, conflicts and comments

Despite the development of technical, scientific and management practices and procedures, indicated above, there are a number of overarching policy issues and constraints that need to be addressed in order to create an enabling environment for implementing the agreed codes of practice. Concerted efforts must be made at all levels to mitigate these constraints and to highlight their importance for promoting sound and sustainable GIAHS management. Among these issues are the lack of clear jurisdictional boundaries, rights and responsibilities; insecure land and resource tenure; corruption, illegal exploitation of natural resources and associated trade; lack of good governance and benefit-sharing; inability to adopt existing eco-labelling and ISO certification systems; under-valuation of GIAHS assets and continued depressed prices for farm and livestock products; sparse political commitment at the highest levels of government; inconsistent and conflicting policies and frequent policy shifts; inappropriate land-use planning and poor watershed management; and inadequate law enforcement. Unless these policy and law enforcement

constraints and conflicts are addressed, there is very limited scope, if any, for implementing so-called sustainable GIAHS management and related codes of practice.

Extreme poverty, inequality, hunger and disease, as well as the current consumption and production patterns skewed in favour of the rich, continue to pose challenges to sustainable development. A major constraint is the lack of resources in developing countries to bear the cost of shifting to the sustainable path. Aid, in terms of ODA, has declined rather than increased since the Rio Summit in 1992, though the Monterrey meeting and its follow-up hold some prospects for reversing the trend. Debt relief has fallen short of what is needed, and subsidies, such as for farming in the developed countries, are distorting trade against the comparative advantage of developing countries and those in transition. The Doha Round of talks on trade and their endorsement at Johannesburg provide no guarantee of reducing such conflicts in the concept of synergizing global environment and development, as was witnessed at the Cancun World Trade Organization (WTO) meeting in 2003. A special effort is needed to loosen these constraints, largely through increased aid and improved trade, particularly for poverty alleviation, the related five WEHAB priority areas of action, and the sustainable management of natural assets including GIAHS traditional knowledge, eco-agriculture and biodiversity.

The principal global function is to provide the framework, context and legal regime required to create incentives for actions that can best be taken at the local, national and regional levels. Yet there are limits to national action in the areas of sustainable development, especially when natural resources and ecosystems are subject to non-site-specific systems or are shared across boundaries. Without a broad framework for action at regional and global levels, countries, especially those that are cash-strapped, have little incentive to act on their own to purse the sustainable path. Whether it is the question of managing shared resources, or combating growing water scarcity, or rehabilitating degraded drylands, coordinated action across borders is required to achieve the desired results. But how much hope can we harbour for sustainable development on the earth when we note that there was no consensus at Johannesburg for timetable and targets on several issues of the global commons, such as climate change or the related issue of renewable energy and greenhouse gases? The apparent conflict must be better understood and the global vision converted into local action, for which the international community could craft a globally effective institution, such as a GIAHS framework, which is wanting; hence the continuing conflicts.

The lack of coherence and consistency across a range of policy areas and strategies dealing with sustainable development creates conflicts of interest among various stakeholders. The existing institutions and policy processes, both at the domestic and international levels, either lack capacity or are often not conducive to integrating the goals of economic growth, social development and environmental management. Sectoral lines of authority continue to dominate decision-making. Horizontal linkages between line ministries, departments and organizations at every level need to be strengthened to enable them to comprehend and pursue sustainable development in a holistic manner, with due attention to cultural and ecosystems diversity. The need for such coordination for promoting sustainable agriculture and rural development can not be over-emphasized. There is indeed an urgent need to have national SARD and GIAHS programmes mainstreamed and effectively reflected in poverty reduction strategies, which are being prepared in most of the developing countries with support from international financing and other institutions.

It is needless to repeat that economy-wide policy reforms and activities in other sectors can and do have cross-sectoral impacts on SARD and GIAHS, even larger than those arising from activities within the sector. Thus, there is a need to ensure that they are in the mainstream of overall development planning of any country; otherwise, adverse impacts on GIAHS and GIAHS-dependent people originating in other sectors will likely be left unaddressed. Examples are broad reforms, such as trade liberalization, and agriculture sector subsidies, which often play a conflicting role in relation to SARD, calling for attention to the cross-sectoral impact evaluation and monitoring of such reforms and policies.

Environmental impact assessment (EIA) is a recognized method for comparing the costs, benefits, welfare and risks of programmes. As opposed to cost–benefit analysis (CBA), EIA is supposed to be aimed at reversing the tendency of decision-makers to put more emphasis on economic data and profitability than on environmental data and long-term development. However, there need be no conflict between the two. A well-conceived EIA can reveal the environmental limits to economic growth, just as there are economic limits to the improvement of environmental quality. What is needed, therefore, is holistic systems design for GIAHS and related renewable resource management, where the social profitability criteria of CBA and sustainability indicators of EIA are appropriately intertwined and continually reviewed. However, the training of sustainable management and development workers and exposure of responsible persons at policy planning levels, especially in holistic management concepts, is still rarely imparted, even in the compartmentalized UN system. At the global level, the international institutions need to ensure broad-based participation and greater transparency in the decision-making process. This remains anathema to many in positions of power, thereby contributing to the constraints of economics versus environment, culture versus progress, and the short term versus the vision of long-term sustainable agriculture and rural development.

Despite the wider global consensus on sustainable development at Rio, Johannesburg and elsewhere, sceptics still question the need to shift to the path of sustainability. Such debates have diverted attention from the core issue of poverty and weakened the resolve to take action. True, Greenpeace and the World Business Council joined hands for an evening at Johannesburg, but the scientific effort to learn the truth has not received the priority it deserves. More, for instance, is required to direct research towards adaptive technologies that promote SARD, and to ensure affordable access to such technologies by developing countries. There is a case for formulating and implementing GIAHS projects and programmes with innovative approaches, which are required for ensuring harmony between the environment and human needs. But the necessity to overcome such constraints is drowned in the conflicting voices of the activists and sceptics.

With little progress so far in addressing these conflicts and constraints, there is serious risk that the commitments of the international community will remain a real challenge for translation into tangible action. But we must remain stoically committed to the common cause of a sustainable planet, with harmony between humanity and the environment, and between the rich and the poor. We must make that happen. A way forward is to 'create incentives for growth for the trinity of governments, donors and individuals', and to leverage globalization for sustainable management, conservation and development of GIAHS, rather than to dispel energy in confronting it – for it has come to stay, warts and all. For there is a need for concrete projects and programmes aimed at eradicating poverty, which is a primary cause and consequence of GIAHS and related environmental deterioration in developing countries. These development projects should promote pro-poor policies and help create an enabling environment for synergies among existing institutions and agreements, advancing understanding and disseminating appropriate technologies for SARD. Their successful implementation should be based on building alliances and partnerships, and mobilizing resources through catalytic development cooperation.

Monitoring, evaluation and review of the development policies, programmes and projects should be undertaken transparently and periodically in order to assess their impact on GIAHS, human well-being and poverty eradication, and to adjust and adapt strategies from lessons learnt. Multi-stakeholder innovative approaches to designing and delivering SARD policies, programmes and projects would be useful. Workshops, brainstorming sessions and small summits to share knowledge and information on best GIAHS practices may be organized at national and regional levels and on thematic issues.

In summary

The poverty–environment nexus is not being addressed appropriately or effectively. The causes and consequences of unsustainable agricultural practices and concomitant cultural threats and environmental degradation are hardly ever emphasized in national development policies and programmes. Nor are they adequately reflected in most of the poverty reduction strategies and related papers (PRSPs).

An analytical road map of the Rio Earth Summit from the Stockholm Environment Conference through to the Johannesburg World Summit on Sustainable Development indicates that Agenda 21 has charted the way to international cooperation for promoting sustainable agriculture and rural development. That should have helped to contribute to the globalization of issues that concern the planet's harmony between humanity and the environment, such as through the sustainable management of GIAHS. While globalization has come to stay, it has had limited impact so far on eradicating poverty, hunger and environmental degradation, especially in Africa and Asia, as also in many parts of Latin America and the Caribbean and countries in transition.

MDGs are a watershed, warranting concerted action by the international community and private–public partnerships for investment in human resources and good governance, locally, nationally and globally. Fair trade and corporate social responsibility assume an enhanced international importance in this context, as does foreign direct investment. Granting property rights, access to basic needs and the empowerment of GIAHS communities as stakeholders in sustainable management process are required to convert global thinking into local action, for otherwise globalization barely touches the vast rural populations, including over 890 million living in and around GIAHS areas and fragile ecosystems at US$0.50 a day or less. This is a challenge that needs to be converted into an opportunity, involving among other things ownership incentives, economic welfare, environmental safeguards, and human well-being of the communities concerned.

Apart from anti-global trade barriers, especially for agriculture products, the developing countries affected have so far failed to improve access to food for malnourished millions. Globalization requires to be backstopped by enabling national institutions and policies, so that the small farmers, pastoralists, agro-foresters, landless and jobless rural millions can continue to count on sustainable livelihoods and gainful opportunities in their traditional farms and fields. Such local and national endeavours for reinvigorating SARD and GIAHS need to be recognized internationally. But even any compensation to communities and countries for their stewardship of eco-agriculture, watersheds, biodiversity, and other natural resources for the global good has not been part of the globalization process so far. There is some expectation of

the Clean Development Mechanism and carbon emission trading bringing benefits to countries, and this could be part of a futuristic globalization process. Such approaches deserve to be encouraged appropriately, keeping in view the precautionary principle for safeguarding the planet's GIAHS agricultural heritage and fragile ecosystems.

Integrated economic, environmental, social and cultural analyses are required at local, national and global levels for promoting holistic development, including the sound management of human and natural resource assets in developing countries, and involving access to markets, technology and investment resources. This calls for unprecedented international cooperation among countries, corporations, academic and research institutions and civil society, to ensure that globalization is a sustainable process, in both theory and practice. Buttressing the linkages between human welfare, SARD and GIAHS is one significant arena to focus on in this context.

Conclusion

Much is being made of the contentious sustainability limits of the earth's resources in advocating the need for environmental protection. Equally often this is done without considering the plight of the poorer communities, whose livelihoods are intimately interlinked with their rural environs and traditional agricultural practices. If the international community resolves to combat their chronic malnutrition, disease, deprivation and destitution, the priority should be poverty eradication. There is space and scope for sustainable development, with win–win situations through holistic approach to the ecological, economic, social and cultural dimensions of the conservation, management and development of agricultural heritage systems and related human and natural resource assets. Good governance, globally and locally, should enable that significantly.

The issue of endangered agricultural heritage must be addressed expeditiously to bring about better harmony between humanity and the environment, before it is too late. Besides local action and good global governance, policy orientation and well-endowed programmes are required to compensate communities and countries for their role as stewards of GIAHS, and for recognizing and rewarding their traditional knowledge, skills and sanctity in implementing sustainable agriculture, rural development, and ecosystems and cultural conservation. Otherwise, the Johannesburg Summit on Sustainable Development will become yet another hot air balloon in converting the challenges of Rio Agenda 21 and the MDGs into an action-oriented opportunity for peaceful progress on the planet.

References and further reading

Carson, R. 2000. (Original edition 1962.) *Silent Spring*. London, Penguin.

Daly, H. E. and Farley, J. 2004. *Ecological Economics: Principles and Applications.* Washington DC, Island Press.

Meadows, D. H., Meadows, D. L., Randers, J. and Behrens, W. W. 1972. *The Limits to Growth: A Report for the Club of Rome's Project on The Predicament of Mankind.* New York, Potomac Associates.

World Commission on Environment and Development. 1987. *Our Common Future*. Oxford, Oxford University Press.

Fig. 3 Qanat: A traditional open canal for carrying irrigation water under controlled conditions [left]

Fig. 4 Dal Lake near a site of saffron cultivation [right]

Session 7

Linking tangible and intangible heritage

Sacred sites as cultural spaces

Rieks Smeets, Intangible Cultural Heritage Section, UNESCO, France

A new UNESCO convention in the field of cultural heritage

Both UNESCO's Man and Biosphere Programme (MAB) and the 1972 Convention concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention) have proven their importance for the identification and protection of natural 'sacred sites'. From 2006, UNESCO will offer another possibility for protecting such sites – whatever their definition – on condition that they are associated with the living social and cultural traditions of present-day local communities and groups.

That new possibility is offered by the Convention for the Safeguarding of the Intangible Cultural Heritage, which was adopted by UNESCO's General Conference in 2003, and which includes 'cultural spaces' in its definition of intangible cultural heritage (ICH). This 2003 Convention (as it is known) entered into force three months after the deposit at UNESCO of the thirtieth instrument of ratification. On Friday, 20 January 2006, Romania became the thirtieth State Party to the Convention so the entry into force of the Convention took effect on 20 April 2006. As of 9 August 2006, 60 states have deposited such instruments of ratification.[1] The First Session of the General Assembly of States Parties took place at UNESCO Headquarters on 27–29 June 2006.

Definition and domains of ICH

The 2003 Convention defines ICH as the practices, representations, expressions, knowledge and skills, as well as the instruments, objects, artefacts and cultural spaces associated therewith, that communities, groups and, in some cases, individuals recognize as part of their cultural heritage (Article 2.1). The Convention also specifies that such heritage is traditional, living and evolving (transmitted from generation to generation and constantly recreated by communities and groups, in response to their environment, their interaction with nature, and their history).

The elements of ICH that the Convention wishes to celebrate, share and safeguard should also (i) provide communities and groups with a sense of identity and continuity, (ii) be compatible with international human rights instruments, and (iii) comply with the requirements of mutual respect among communities, and of sustainable development. The 2003 Convention wishes to enhance processes rather than products, repeatedly underscoring the living character of the ICH, which it wishes to see persist. Safeguarding, importantly, is said to mean measures aimed at ensuring the viability of the ICH (Article 2.3).

Article 2.2 of the Convention mentions a number of domains in which ICH is manifested, explicitly stating that the list of these domains is not exhaustive. The following domains are mentioned:

a. Oral traditions and expressions, including languages as a vehicle of the ICH.
b. Performing arts (such as traditional music, dance and theatre).
c. Social practices, rituals and festive events.
d. Knowledge and practices concerning nature and the universe.
e. Traditional craftsmanship.

The Intergovernmental Committee that will implement this Convention may wish to propose to extend this list. UNESCO's Member States have already asked that attention be given to such domains as 'traditional games and plays', 'places of memory' and 'culinary practices and traditions'. The operational directives that will guide the implementation of the Convention will reflect the Committee's decisions on this issue. It goes without saying that the domains mentioned here are not mutually exclusive. Oral expressions, dance and music for instance may very well come together in one total event (such as a ritual, a carnival or a healing practice) and may, in passing, express knowledge about nature and confirm social relations.

Lists and programmes

Like the World Heritage Convention, the 2003 Convention establishes two lists, one of which is called the Representative List of the ICH of Humanity, the other, the List of ICH in Need of Urgent Safeguarding. The criteria for inscription on these lists will have to be elaborated by the Intergovernmental Committee, for approval by the General Assembly of States Parties. In this respect, the 2003 Convention nowhere poses or hints at a condition of outstanding universal value, which is the basis for inscription on the World Heritage Lists; it does introduce, however, such criteria as 'living and traditional', which were mentioned before, and representativity.

The elaboration of the notion of representativity is another task for the future; however, the governmental experts who prepared the draft of the Convention agreed that no hierarchy is to be established between cultures – the 2003 Convention consistently avoids using the word 'civilization' – and that, consequently, the Convention should not wish to establish a hierarchy between cultural expressions that are listed and those that are not.

An important task of the Committee will be the examination and approval of requests for international assistance for safeguarding programmes and projects. Such programmes and projects might, for instance, relate to elements inscribed on the List of ICH in Need of Urgent Safeguarding, or aim at assisting States Parties in the preparation of inventories.

Links between ICH and tangible elements and heritage

With the adoption of the 2003 Convention the world community has acknowledged that – using the language of the Yamato Declaration – safeguarding ICH is as important as protecting tangible cultural and natural heritage, and that ICH has to be considered and safeguarded in its own right.[2] The Yamato Declaration (Annex III of this publication) refers both to the interdependency of and the differences between tangible and intangible heritage, further stating that there are countless examples of ICH that do not depend for their existence or expression on specific places or objects. As a matter of fact, ICH elements are enacted by people, who necessarily find themselves somewhere, using their body as their main means of expression. They often wear special clothes, masks and other ornaments during performances and representations, or change their appearance through, for instance, hair arrangements, paintings or piercings; they may also use specific instruments, objects and artefacts.

Often, indeed, certain elements of ICH are linked to specific locations, which is why the preamble of the 2003 Convention refers to a deep-seated interdependence between the ICH and the tangible cultural as well as natural heritage. Objects and places that are instrumental in ICH performances and representations, as a rule, however, do not have a special – let alone an outstanding or universal – value in and by themselves. Because of their function during intangible heritage practices they may be recognized by a community as belonging to its cultural heritage. However, for the communities objects that are related to living practices are, as a rule, there to be used, and to be replaced if damaged or destroyed, not to be preserved as museum items.[3]

Processes often cannot be protected or promoted in a direct way. It is normally material, political, societal or environmental circumstances that are necessary to enable groups and communities to develop their ICH and to continue enacting and transmitting it, that have to be ensured, created or revitalized.

Objects and spaces: auxiliary elements

The definition of ICH as elaborated for the 2003 Convention – see above – explicitly includes instruments, objects, artefacts and cultural spaces, that are associated with manifestations of ICH. The use of these auxiliary material elements, and – if appropriate – the knowledge relating to their creation or maintenance, is traditional in as far as they are handed down through the generations; their form and function can evolve with the development of the practices and expressions during which they are used and with new materials available. If aspects of these auxiliary elements are distinctive for specific groups, then they may be as important for the identity of the groups in question as the ICH manifestations with which they are associated. It is not the intention of the 2003 Convention that material auxiliary elements of the ICH be highlighted, or inscribed on one of its two Lists, in their own right. Such material elements, if indeed they are associated with living expressions or practices, may be targeted in safeguarding measures related to those living expressions and practices.

The 2003 Convention explicitly asks for attention for cultural spaces in the definition of ICH not only in Article 2.2, but also in Article 14, which requests States Parties to promote education for the protection of natural spaces and places of memory which are essential for expressing manifestations of ICH. Objects and spaces that once formed part of the ICH of a group or community, but that are no longer associated with living practices, cannot be protected by the 2003 Convention. For the same reason, values associated with monuments and sites are not considered ICH as defined under the 2003 Convention when they belong to the past and not to the living heritage of present-day communities (Yamato Declaration).

States inventorying the ICH

States Parties to the 2003 Convention commit themselves to taking the necessary measures to ensure the safeguarding of the ICH present on their territory. The first measure to be taken is to identify and define the various elements of that heritage. To ensure identification, States Parties are asked to draw up one or more inventories of their ICH.

It would appear that the inventories to be prepared by States

Parties will have to take into account the tangible auxiliary elements that belong to the ICH, and that these elements, too, have to be safeguarded, which in the first place means that the groups concerned must be able to use them and to maintain or produce them anew. Quite importantly, one of the tasks of the State Party is to ensure access to the ICH while respecting customary practices governing access to specific aspects of such heritage. The access question may entail discussions with museums that then would have to agree to lend or return specific objects to communities, and concerning the accessibility of cultural spaces, with authorities and/or private landowners.

The 2003 Convention leaves to its States Parties a large degree of freedom when it comes to drawing up their inventories; some States have already started to prepare inventories including ICH. Lithuania, for instance, included associated objects in its inventory of ICH; Bulgaria did not. Venezuela has started describing the cultural heritage of its local communities, presenting – and keeping apart – tangible and intangible elements, which are presented under the following categories: Objects, Built Elements, Individual Creations, Oral Traditions and Collective Manifestations. [4]

Cultural spaces

The term 'cultural space' is not without its history in the UNESCO context. The programme of the Proclamation of Masterpieces of the Oral and Intangible Heritage of Humanity, which has proven to be of invaluable significance as the testing ground for listing ICH as now intended by the 2003 Convention, rewards traditional cultural expressions and cultural spaces, cultural space being defined as a place that brings together a concentration of popular and traditional cultural activities or as a time for a normally regularly occurring event. [5]

The Statutory Bodies of the 2003 Convention will have to define the term 'cultural space' as used in the Convention. That definition no doubt will include natural as well as human-made spaces, and also natural spaces influenced by people. Since all these spaces can be more or less holy, or sacred, it is clear that sacred natural sites, as defined in the documentation sent to the participants in this meeting, will also be covered by the notion of 'cultural space'. There follows two quotations from that documentation:

> Sacred natural sites are areas where nature, the divine and remembrances come together in special combinations that are particularly meaningful to a community, society, or people. They can be the abode of deities, nature spirits and ancestors. They can be feared and secret places and they can be benign areas for contemplation and meditation allowing also communication with the transcendental. Common to most sacred natural sites is that they are areas removed from everyday access and resource use.

> The term 'sacred natural site' is used in this document in a generic sense as a place that is venerated and held in awe. Thus, while the term may refer to sites of religious importance, it also encompasses places that are of symbolic significance; where space, place, memory, and spiritual meaning come together; a sacred natural site may also be a place valued for contemplation or meditation.

Safeguarding cultural spaces

As was previously mentioned, the 2003 Convention wishes to safeguard living processes, by assisting communities and other groups of tradition holders to continue their expression and transmission. Often it is also material elements, whether objects or spaces, that will have to be protected to this effect. If the deterioration, destruction or inaccessibility of a cultural space contributes or might contribute to the erosion or disappearance of an ICH expression, then the action plan – if action will be taken – will have to deal with the preservation of such a space, or – if need be – with the regulation of access to it.

If the cultural space in question happens to be, or forms part of, a biosphere reserve or a World Heritage Site, then cooperation is called for between the MAB programme and/or the World Heritage sector and the 2003 Convention. If a cultural space associated with a manifestation of ICH has not been recognized – under whatever criteria – by either or both systems, the 2003 Convention will still have to call for the expertise of specialists in the field of protection of natural sites and heritage. To conclude, as indicated in paragraph 11 of the Yamato Declaration, in both types of cases integrated approaches should be elaborated to the effect that the safeguarding of the tangible and intangible heritage of communities and groups is consistent and mutually beneficial and reinforcing.

Notes

1. For the complete list of signatories, go to: www.unesco.org/culture/ich_convention/index.php?pg=00024
2. For the text of the 2003 Convention, the Yamato Declaration and other documentation related to intangible heritage, go to: www.unesco.org/culture/heritage/intangible
3. See specifically pp. 121–62 of Clavir (2002).
4. Catalogo del Patrimonio Cultural Venezolano, in preparation by the Instituto del Patrimonio Cultural de Venezuela.
5. See para. 7 of the Guide for the Presentation of Candidature Files for the programme.

Reference

Clavir, M. 2002. *Preserving What is Valued*. Vancouver/Toronto, Canada, UBC Press.

Biodiversity in the sacred forests of Xishuangbanna Biosphere Reserve, China

Pei Shengji, Kunming Institute of Botany, Chinese Academy of Sciences, China

Summary

The Xishuangbanna Biosphere Reserve is located in the tropical mountainous area of Yunnan Province, south-west China. The altitude varies from 430 m to 2,300 m, and the biosphere reserve occupies a land area of 241,776 ha, of which 87 per cent consists of tropical mountain forests, containing 3,890 species of vascular plants and 620 species of terrestrial vertebrates, of which 53 species of plants and 109 species of animals are prioritized under state protection. The reserve is inhabited by thirteen ethnic minority groups, with a population of 22,000 scattered over the forest area.

The Xishuangbanna Biosphere Reserve is one of China's nature reserves presenting extremely rich biological diversity and great cultural diversity of local people in the protected area. The long history of interactions between nature and human culture has had a significant impact on the management practice of landscape and forest resources in this mountain region. Indigenous people in the reserve have a long tradition of belief in sacred forests, which is based on the forest conservation culture.

Sacred forests surrounding villages are looked after and maintained, they are known locally as the *Nong* forest, meaning the forest where gods and ancestors reside. Belief in the sacredness of the forest and practices of protection play an important role in the conservation of the forest and biodiversity in Xishuangbanna. This paper reports on and discusses the traditional ways of conserving biodiversity through cultural values and practices in Xishuangbanna, with emphasis on the sacred forests in the biosphere reserve.

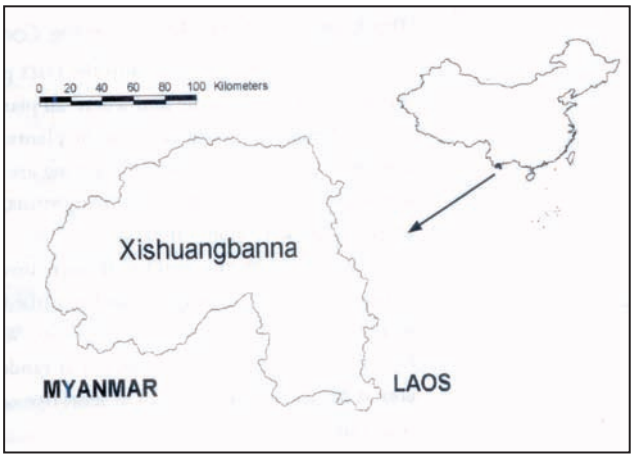


Fig. 1 Location map Xishuangbanna Biosphere Reserve in China

Background

Xishuangbanna is located in the south of Yunnan province in south-west China (24°10′–22°40′ N, 90°55′–101°50′ E). It borders the Lao People's Democratic Republic in the south and south-east and Myanmar in the south-west (Figure 1). Approximately 94 per cent of the total area of 19,220 sq km of Xishuangbanna consists of mountainous and hilly terrain, with river valley making up the remaining area. Geographically, this mountainous zone is a southern extension of the Hengduan Mountains, the eastern appendages of the Himalayas, where the upper Lancang Jiang (Mekong) River and its tributaries form the major river system. Tropical forests are scattered all over the area and account for 33.8 per cent of the total land coverage (Pei, 1993). The altitude varies from 430 m to 2,300 m, annual rainfall varies from 1,200 to 1,700 mm, the average temperature is about 21.5°C and relative humidity is around 80 per cent. Benefiting from a special location which allows diverse climates and landforms, Xishuangbanna is well known in China for its biodiversity.

However, with modern development and population expansion in the last half-century, the area's land-use

pattern has been drastically changed from traditional subsistence agriculture to a modern plantation economy. Rubber, tea and tropical fruits are extensively planted and owned by private and state farms. The coverage of tropical forest has been reduced from 60 per cent in the 1950s to around 30 per cent in the 1980s, resulting in the loss of about 600 species of plants (Xu, 1988).

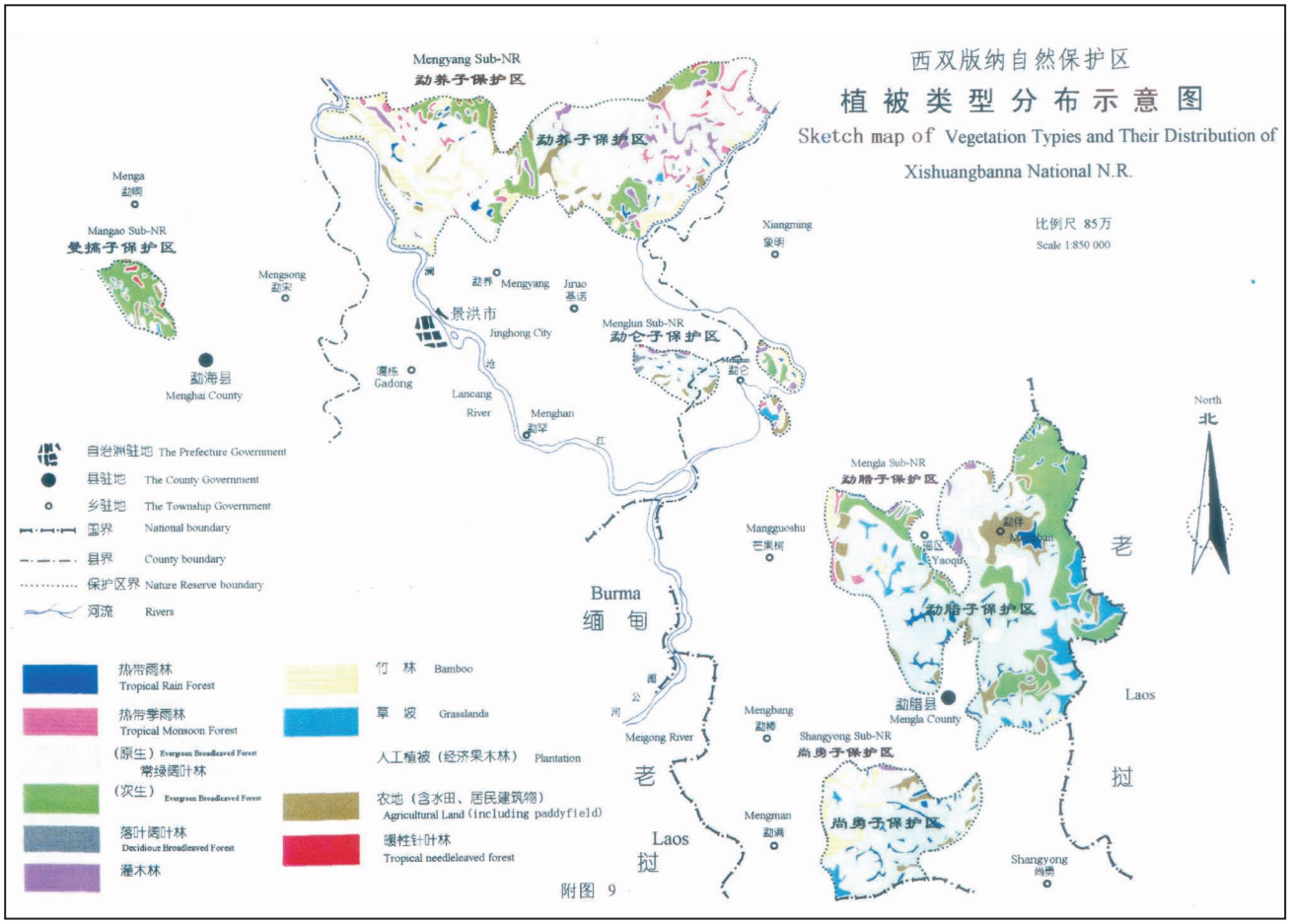
Since 1958, the government has paid great attention to the conservation of biological diversity in the area, leading to the establishment of the Xishuangbanna Nature Reserve in 1958. This gained the approval of the People's Government of Yunnan Province and it was promoted in 1981 to be a National Nature Reserve, with the tropical forests and rare and precious wildlife as its major protected objectives. In 1993 the reserve joined the UNESCO Man and Biosphere Pogramme of the World Network of Biosphere Reserves (SEPA, 2003).

It is important to mention that on the same year (1958) that Xishuangbanna was declared a Nature Reserve by the Yunnan government, the Chinese Academy of Sciences established two important biological research institutions in Xishuangbanna. The establishment was based on the results of five years (from 1954 to 1958) of field expeditions of integrated studies on the flora, fauna and ecology of the Yunnan tropical area, organized and conducted by the Chinese Academy of Sciences. With this background, an ecological monitoring station was established in 1958 on 53 ha of sacred forest, the Man-Yuang-Kwang *Nong Shan* in Xishuangbanna. The sacred forest is a tropical monsoon forest that is well protected by the local Dai community through their worship of God and their ancestors.

Another scientific research institute established in Xishuangbanna was the Xishuangbanna Tropical Botanical Garden (XTBG). The garden is located in Menglun, a corridor forest area of the Xishuangbanna Nature Reserve. The garden functions as an important research base for tropical botany, and has 700 ha of living plant collections for *ex situ* conservation of tropical plant diversity in China. In the 1980s, a long-term ecosystem monitoring station was established in the garden, which is one of the thirty-seven stations of the China Ecosystem Research Network (CERN), and is involved in the International Long-Term Ecological Research (ILTER) programme. The monitoring station consists of 1 ha of tropical rain forest and 50 ha of conservation forest in the garden.

Xishuangbanna Biosphere Reserve is composed of five sub-nature reserves (NR) located in five areas of Xishuangbanna's territory. The five sub-NR are Mengla sub-NR (92,932 ha), Shangyong sub-NR (30,538 ha), Menglun sub-NR (11,242 ha), Mengyang sub-NR (99,760 ha) and Manggao sub-NR (7,304 ha).

In total, the land of the reserve spans 241,776 ha, occupying 12.4 per cent of the total area of Xishuangbanna. This includes forest land of 197,819 ha (81.82 per cent), bamboo forest land of 14,313 ha (5.92 per cent) and non-forest land of 26,908 ha (11.13 per cent). Forest vegetation on the reserve mainly consists of tropical rainforest (Mengla sub-NR and Menglun sub-NR), tropical monsoon forest (Mengyang sub-NR, Shangyong sub-NR and Menglun sub-NR), and mountain evergreen broadleaved forest, mixed evergreen and deciduous broadleaved forest and tropical needle-leaved forest (Manggao sub-NR and Mengyang sub-NR). Bamboo forests are distributed all over the five sub-NRs (XNR, 2003). Because of the humid tropical climate and



continuous low hills criss-crossed with rivers, the reserve is green all year round and has the best preserved tropical forests in China (SEPA, 2003).

Biodiversity in the Xishuangbanna BR

There are about 4,669 species of vascular plants recorded in Xishuangbanna, which make up 18 per cent of China's total. There are 727 recorded vertebrate species, 20 per cent of the total number in China (of 3,317 species), although the area covers only 0.2 per cent of the total land surface of China. Therefore, Xishuangbanna is considered the richest area for its biological diversity in China (Wan and Chen, 2004).

Xishuangbanna Biosphere Reserve plays a key role in conserving this rich biodiverse area. It has 3,890 identified species of vascular plants, including 53 species under the priority protection of the state, and 620 species of terrestrial vertebrates, of which 109 species are under the priority protection of the state. There are 102 species of mammals (20 per cent of China's total); 427 species of birds (26 per cent of China's total); 38 species of amphibians and 60 species of reptiles (43 per cent of China's total). There are also 1,437 identified insect species found in the reserve (Wan and Chen, 2004).

Some of the important protected species of wildlife are *Hylobates concolor lencogenys, Elephas maximus, Panthera tigris, Tragulus javanicus, Bos gaurus and Bos banteng, Necticebus* spp, *Macaca nemestorina, Preabytis phayrei* and *Povo muticus imperator*. Important plants include *Parashorea chinensis, Cycas petinata, Cycas siamensis, Fleutharrhane macrocarpa, Amentotaxus yunnnanensis, Nyssa yunnanensis, Oryza officinalis, Oryza granulata, Myristica yunnanensis, Camptotheca acuminata, Aquilaria sinensis, Vatica Xishuangbannaeusis, Litchi chinensis var, and euspontanea* (XNR, 2003).

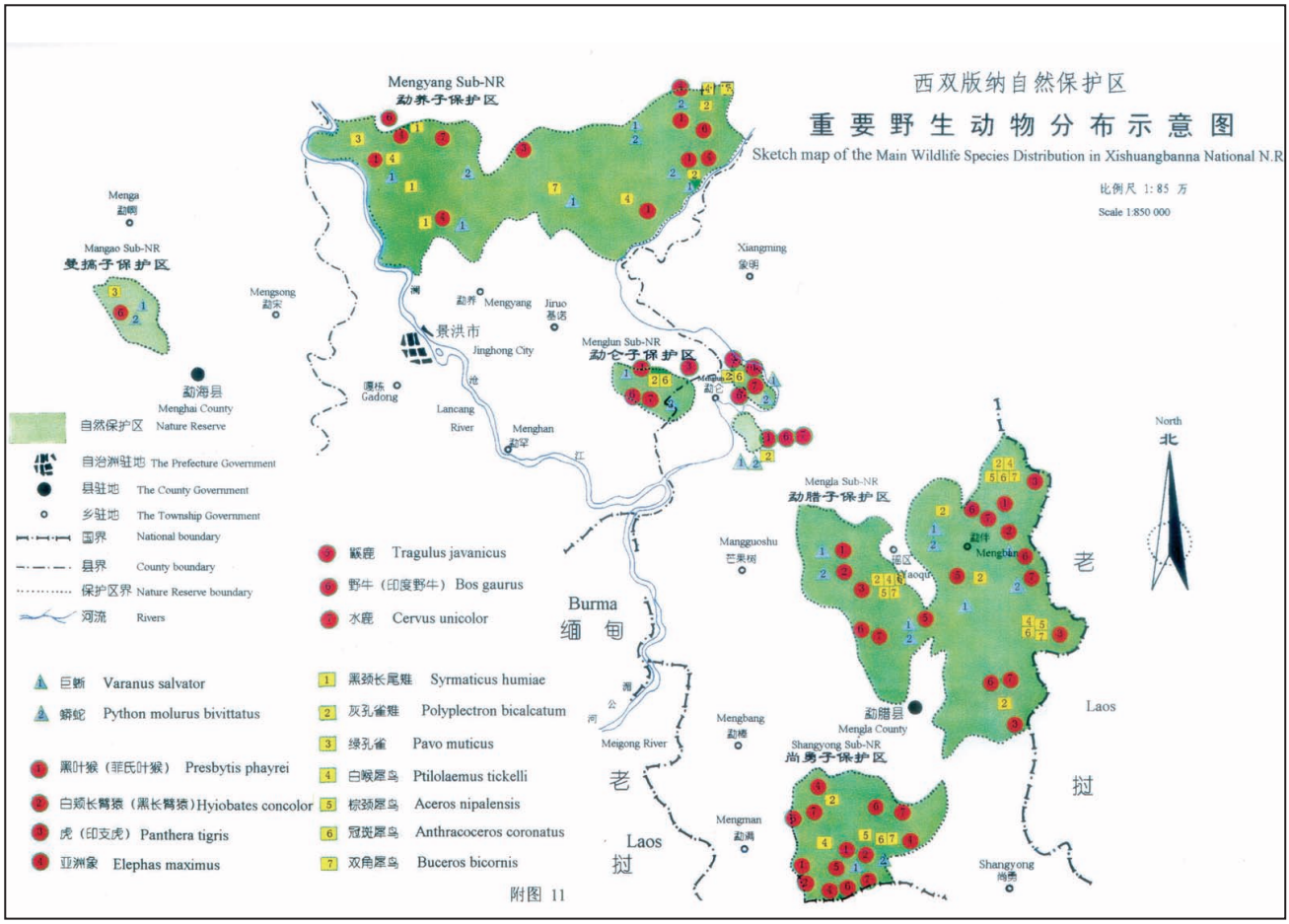
People in the Xishuangbanna BR

Xishuangbanna is a Dai autonomous prefecture of Yunnan province, although there are thirteen ethnic groups inhabiting the area. The total population is 817,000 (as of 1995), of which the Dai people are the largest single ethnic group,constituting about 35 per cent of the total. For centuries, the Dai have developed a paddy-rice cultivation-oriented economy, along

Fig. 2 The lush vegetation of Xishuangbanna BR [left page, left]

Fig. 3 A footbridge in Xishuangbanna BR [left page, right]

Fig. 4 Distribution of the vegetation types in Xishuangbanna BR [above]



附图 11

with the cultivation of tea, fruits, herbs and spices in home gardens. Other ethnic minority groups in Xishuangbanna are the Hani, Yi, Bulang, Lahu, Yao, Jinuo, Wa, Jinpo, Miao and Kemu people. These people are scattered over mountainous forest areas, and practise swidden or shifting agriculture and the semiwild cultivation of tea trees, along with gathering and hunting for their livelihood.

Although the valley Dai people largely depend upon paddy-rice cultivation for their livelihood, forests in the mountainous and hilly areas supply various plant and animal products to support their daily life and nutrient balance. More importantly, the water supply is guaranteed by the protection of forests in the hills and mountains. Meanwhile, the mountain ethnic groups are mainly dependent on forests for swidden cultivation and the harvesting of wild plants and animals from mountain forests. The heterogeneity of economic systems and different survivor strategies adopted by the Dai and the mountain ethnic groups are interdependent and complement each other. Thus a relationship of harmony is established between people and nature, and between people of different cultures in Xishuangbanna. In this regard, traditional cultural beliefs and practices in relation to nature conservation among ethnic minorities in the region, play a key role in the conservation of the natural environment and biodiversity. The conservation of sacred forests has made a great contribution to the protection of forests and biodiversity in Xishuangbanna.

There are 122 villages of indigenous peoples with a population of 22,000 inhabiting the biosphere reserve, and 163 villages of different ethnic groups with a population of 41,600 in the surrounding areas of the reserve, including Dai, Hani, Jinuo, Bulang, Yao, Yi, Lahu, Wa, Jinpo, Miao and Kemu. The first task to determine for a newly established village is the location of the village sacred forest, which is usually natural forest land of between 1 and 5 ha located in a nearby hill or upper slope of the village locality. Thus, in the local culture, sacred forest is an important component of the ecosystem along with village houses, farming fields, home gardens and forests.

Sacred forest in the Xishuangbanna BR

The sacred forest, or holy hill in local culture, is known as *Nong* forest in the Dai and Bulang languages. Traditionally each village had a sacred forest. Before 1958, there were approximately 1,000 of these sacred forests occupying a total area of 100,000 ha of natural forest land, or about 5 per cent

of the total land of Xishuangbanna (Gao, 1999). However, currently there are only about 250 holy hills in Xishuangbanna, occupying between 1,000 and 1,500 ha (Liu et al., 2002). About 90 per cent of the sacred forest has disappeared in Xishuangbanna in the last fifty years.

In the traditional concepts of the Dai, the sacred forest is a forested hill where the gods reside. All the plants and animals that inhabit the sacred forest are considered to be companions of the god or 'sacred living things' in the god's garden. In addition, the Dai believe that the spirits of their ancestors and great and revered chieftains go to the sacred forest to live following their departure from the world of the living. Any violence to or disturbance of plants and animals in the forest will be punished by the gods. Therefore, hunting, gathering and cutting are strictly prohibited in the sacred forest (Pei, 1985, 1991; Liu et al., 2002).

The Dai originally followed a polytheistic religion which was heavily bound to the natural world and had a forest-oriented philosophy. The Dai perception of the interrelationship of human beings with their physical environment is that it consists of five major elements: forest, water, land, food and humanity. They believe that the forest is humanity's cradle, water comes from the forests, land is fed by the water, and food comes from the land that is fed by the water and rivers. Human life is supported by the forests and the forests are one with the supernatural realm (Pei, 1985, 1991). Among Dai folk songs, there is one that says, 'Elephants walk with forests, the climate with bamboo.' Another Xishuangbanna folk song says, 'If you cut down all the trees, you have only the bark to eat; if you destroy the forest, your destroy your road to future' (Wang, 1988).

Other ethnic groups such as the Hani, Bulang and Jinuo in Xishuangbanna have similar beliefs and sacred forest traditions. The Hani, the second largest minority group in Xishuangbanna, have a traditional classification system for sacred forests (Wang, 1998). For instance, there is the Earth Mother sacred forest, the water source forest and the cemetery forest, maintained in the Hani's settlement area of the Mengsong Mountains. In the deep forest of the Mengyang sub-NR, a small Bulang village, Kun-man, maintained a well-protected sacred forest called *Nong Deng* or the horse-riding mountain. This is about 200 hectares of evergreen mountain forestland with elephants, black bears, tigers and horned birds. Its trees and plants include Yunnan

Fig. 5 Distribution of wildlife species in Xishuangbanna BR [left]

Fig. 6 Cleansing with water in Xishuangbanna BR [right]

eaglewood (*Aguilaria yunnanensis*), *Cycas siamensis*, wild mango (*Mongefera sylvestris* and *M. siamensis*) and medicinal orchids (*Dendronbium* spp.). The Jinuo people inhabit the Jinuo mountain of the Menglun sub-NR of the Xishuangbanna Biosphere Reserve. All the forty-three villages of Jinou, with a population of 17,735 (as of 1995), are located in forested areas, and more than half the villages are in the reserve or buffer zones. The Jinuo maintain god forests and water-source forests near village sites along with traditional tea gardens. The Jinuo have established community regulations and do not allow the cutting-down of religious trees (*Ficus altissima*), wild fruits (wild lychee, rambtan, mango and canarium) and palms in swidden fields.

Liu et al. (2002) investigated twenty-eight sacred forests in Xishuangbanna's holy hills. In each sacred forest, all plant species were investigated and identified. Four samples (each 50 x 50 m) were established in four sacred forest sites, within which five quadrats of 10 x 10 m were selected at random. All individual plants above or equal to 5 cm diameter at breast height (DBH) of tree species and shrub species were investigated in the sample and quadrats. The Shannon–Weiner index was used for comparisons of plant species diversity. The results show that most sacred forests are distributed in the regions below 900 m asl, where the vegetation types are mainly dry evergreen seasonal rainforest and semi-evergreen seasonal rainforest. Because of the expansion of modern plantations (Xu and Jiang, 1985; Wu, 1987) there are hardly any of these kinds of vegetation in other places, even in the national nature reserves. According to the study there are 268 plant species belonging to ninety-two families in the sacred forests investigated. Fifteen species are protected species listed in the 'Plant Red Data List of China' such as *Magnolia henryi*, *Homalium laoticum* and *Antiaris toxicaria*, and these constitute 30 per cent of the total protected plant species. The indexes of plant species diversity in sacred forests are similar to those in the nature reserve. Therefore, the sacred forest can be considered as small forest reserves established by the Dai traditional beliefs (Liu et al., 2002).

So far there is no detailed information about the exact number of sacred forest sites maintained and their biodiversity in the Xishuangbanna Biosphere Reserve. According to the author's recent visit to the biosphere, it is believed that every village in the reserve has a sacred forest, which means there are 285 sacred forests covering in total about 500 to 1,000 ha of forest land that are maintained in the biosphere reserve. Before the reserve was established, all sacred forests were managed by the traditional institutions of each village, led by the village head man or *Bimo* (the village ritual specialist). Worship ceremonies are conducted in August or November every year and participated in by all members of the village, by offering food: chickens, ducks and pigs. The activity lasts a whole day from morning to evening. Violation of the village regulation prohibiting disturbances of the sacred forest and cutting trees is punished by paying money: from US$20 to US$40 for one tree. Now the nature reserve has been established, sacred forests are managed jointly by the reserve and village in participatory management approaches. Community regulations on the sacred forest and traditional custom and worship activities can also be organized and implemented depending on the villagers' interests. According to an interview with people in four villages in the reserve, there was no case of any cutting, hunting or harvesting activities by local people in the sacred forest area over the past twenty years. This shows that community participation in sacred forest management in the reserve is effective and successful.

Discussion

The conservation of nature through cultural value systems, especially the traditional belief in sacred forests, has made a great contribution to biodiversity conservation. As reported in this paper, the Dai people and other indigenous ethnic minority people in the Xishuangbanna Biosphere Reserve in Yunnan Province, in the long history of interaction with their natural environments, have established harmony and a balanced relationship with nature through the practice of traditional knowledge, technologies and cultural beliefs. Respect, recognition and learning from these cultural traditions would be of great benefit to the conservation of nature and biodiversity today.

The approaches of conserving biodiversity through traditional cultural beliefs in Xishuangbanna, south-west China, and the results found show that indigenous approaches of conserving biodiversity based on cultural and religious values are often more sustainable than those based solely on government legislation or regulation. However, the indigenous approaches of resource management and conservation were established for a relatively small population, large forest cover, rich biodiversity and a

subsistence economy basis. Today, the world faces the challenges of market pressure, globalization, population expansion, new technologies, environmental degradation and a decline in biodiversity. Therefore, there is a long process to be undertaken of promoting the wide use of indigenous knowledge, traditional culture and local practices in the conservation of biodiversity. The example of Xishuangbanna Biosphere Reserve shows that 90 per cent of the sacred forests have disappeared in the past fifty years, and that sacred forests located in the biosphere reserve and its buffer zones were under protection through community participation in conservation and maintaining cultural biodiversity in the region as a whole. This suggests that in places with rich biological and cultural diversity, they should be considered jointly within an integrated approach to biodiversity conservation.

Today, the problems of the degraded environment and the loss of biodiversity in many developing countries are mainly the result of guided development interventions and the overexploitation of natural resources for short-term economic development, rather than development based on the knowledge systems of indigenous communities which have maintained diverse resources for thousands of years (Pei, 1993). To improve the current situation of conservation strategy and approaches, it is important to further strengthen cooperative actions locally in conservation, with support from government and international communities. Recently, scientists joined with state protected areas (PAs) and local communities to plan the development and establishment of three Sacred Nature Reserves (SNRs) in the Yunnan Province. They are:

* Xishuangbanna Biosphere Reserve.
* The Meili (Kagerbo) Snow Mountain Reserve, the highest mountain in Yunnan (6,740 m above sea level) in the Chinese Himalayas, which is one of the most important holy mountains for Tibetan Buddhism (Lamaism), and a habitat for endemic species including *Uncia uncia* (snow leopard), *Moschus berezovskii* and *Pseudois schaeferi*.
* Zixishan Nature Reserve in the central-western part of Yunnan Plateau, at an altitude of from 1,600 to 2,300 m, dominated by mountain evergreen forest and a meeting point of the indigenous Yi culture, the Buddhist culture, the Nan-Zhao culture and traditional Chinese culture, which have made contributions to the conservation of biodiversity in Zixi Mountain for over a thousand years.

The objective of the initiative is to seek government support at policy level and implement a cultural approach of conservation based on the traditional beliefs in sacred forests, sacred mountains and sacred plants established by local people. It is hoped that the SNRs will serve as a functioning component of the three natural reserves for biocultural diversity conservation in the Yunnan Province of China.

References

Wang Jian-hua. 1998. *Traditional Culture and Biodiversity Management of Mountain Ethnic Group in Xishuangbanna, A Case Study of Mengsong Hani Community*. MSC thesis, Kunming Institute of Botany, Chinese Academy of Sciences.

Gao Lisi. 2003. *On the Dai's Traditional Irrigation System and Environmental Protection in Xishuangbanna*. Yunnan, Yunnan Ethnic Press

Liu Hongmao, Xu Zaifu, Xu Youkai and Wang Jinxiu. 2002. Practice of conserving plant diversity through traditional beliefs: a case study in Xishuangbanna, southwest China. *Biodiversity* and *Conservation*, Vol. 11, pp. 705–13.

Pei Shengji. 1985. Some effects of the Dai people's cultural beliefs and practices upon the plant environment of Xishuangbanna, Yunnan Province, Southwest China. K. Hutterer, T. Ramboo and G. Lovelace (Eds.), *Cultural Values and Human Ecology in S. E. Asia*. Paper no. 27, Ann Arbor, MI, University of Michigan.

Pei Shengji. 1991. Conservation of biodiversity in temple yards and holy hills by the Dai ethnic minority of China. *Ethnobotany*, Vol. 3, pp. 27–35.

Pei Shengji. 1993. Managing for biological diversity in temple yards and holy hills: the traditional practices of the Xishuangbanna Dai community, southwest China. L. S. Hamilton (ed.), *Ethics, Religion and Biodiversity: Relations Between Conservation and Cultural Values*. Harris, UK, White Horse Press.

SEPA. 2003. *National Natural Resources in China*. State Environmental Protection Administration, People's Republic of China.

Wang Zan-xiang and Chen Minyang. 2004. The kingdom of animals: nature conservation of Yunnan. *Journal of Yunnan Forestry*, Vol. 15.

Wang Ningseng. 1988. Preservation and development of minority culture in S.W. China: a case study on ethnobiology. *Proceedings of the XIIth International Congress of Anthropological and Ethnological Sciences, Zagreb, Yugoslavia*.

XNR. 2003. *Xishuangbanna Nature Reserve (XNR) Report: A Collection of Government Policy, Legislation and Regulations on Conservation and Nature Reserves*. Bureau of XNR, China.

Xu Zaifu. 1988. The conservation and utilization of plant resources in the tropics of Yunnan. *Botanica Yunnaica* (Suppl.), Vol. 1, pp. 113–24.

Fig. 7 Shrine in Xishuangbanna BR

Sacred groves, rituals and sustainable community development in Ghana

Edward M. Telly, Environmental Protection Agency, Ghana

Summary

In Ghana, certain traditional religious practices, beliefs and taboos have led to the protection of rivers, some forests/woodlands, water bodies and mountains, alongside the animals that inhabit them, as sacred groves or sites. Sacred groves, which abound in Ghana particularly in the northern Ghana Guinea savanna zone, have been protected by the indigenous people as the abodes of their gods and ancestral spirits.

This paper highlights some identified traditional mechanisms for protecting and managing sacred groves alongside their underlying environments by the local people in the northern Ghana Guinea savanna zone. It focuses on the Jaagbo sacred grove, which is located near Tali in the Tolon-Kumbungu district of the Northern region of Ghana. These traditional practices have been found to be consistent with modern ecological conservation and environmental protection. The paper also demonstrates how the cohesive issues and intermix of scientific, cultural and educational studies and intervention activities by the Cooperative Integrated Project on Savanna Ecosystems in Ghana (CIPSEG) executed by UNESCO from 1993 to 1996, and other subsequent interventions have assisted the local people in the consolidation, rehabilitation and expansion of the sacred groves and the biodiversity they contain, and in particular the restoration of the degraded adjoining areas to suit the diverse ecological and sociocultural needs of the local communities. The paper also highlights some sustainable community development initiatives that have been undertaken by the local people to improve their living conditions as an alternative to natural resources exploitation.

Introduction

The northern Ghana Guinea savanna is undergoing rapid degradation of its resources. However, scattered in the fast-degrading lands there still exist patches of forest or woodland, commonly referred to as sacred groves (fetish groves). These sacred groves, as their name connotes, are areas regarded by the local people as the abodes of their ancestral spirits and gods. The establishment of these sacred groves in certain sensitive ecosystems including forests, rivers banks, streams, ponds and mountains has greatly resulted in the conservation of these areas by the local people.

Since time immemorial these sacred groves, including the Jaagbo, have been jealously protected using various indigenous and cultural methods through certain traditional means, religious and cultural beliefs and taboos. Some of these traditional religious beliefs, taboos and unwritten local laws serve as regulatory mechanisms and spell out the dos and don'ts pertaining to the use of the resources contained in the sacred groves. These have been found to be consistent with modern biodiversity conservation practice or environmental protection.

The Jaagbo sacred grove is located near Tali, west of Tolon in the Tolon-Kumbungu district of the Northern region of Ghana. It is about 36 kilometres west of Tamale on the Tamale to Daboya road. The grove is approximately 1 sq km in size, and is predominantly savanna riverine forest or woodland with a stream running from east to west serving as a source of water for some communities and wildlife fringing the grove.

History and current belief systems

The Jaagbo sacred grove has a long history dating back to the fifteenth century, long before the princes of Dagbon (the Dagomba Kingdom) attempted to destroy the chief priests and priestesses and their sacred groves. According

to oral history, Jaagbo grove (a name deriving from *Jaa* (twin) and *gbo* (diseases)) was discovered as a result of two disease epidemics that struck the Tolon area of the Northern region of Ghana. Jaagbo first appeared at Kalikaa near Wombong, but was not recognized until there was the first epidemic of whooping cough and measles on the land. Soothsayers and oracles were consulted, and they traced the epidemic to the neglect of Jaagbo. The soothsayers showed the people where Jaagbo could be found (at Kalikaa) and prescribed a sacrifice and an abode in the forest where it could be protected against the sun and rains.

Not long afterwards a second epidemic struck, and the oracles again predicted the need for sacrifices to be made to a twin god, which was traced to the present location of the Jaagbo grove. The oracles indicated that the location was to be in the middle of the forest, in a clear and clean space near a pond that never dries up and with a hole by the pond. The grove location was also to be predominantly surrounded by *sheri* trees (*Mitragyna inermis*).

When Jaagbo was finally found and the necessary sacrifices were made, the epidemic seized. The symbol of the Jaagbo grove at Tali is a leopard. It is believed that it often takes the form of other animals like a crocodile or python to move around the area. Hence these animals are neither killed nor eaten by the people.

Traditional belief systems and regulatory mechanisms for conserving sacred groves

The preservation of sacred groves and in particular Jaagbo over a long period of time lies in the people's belief that sacred groves are the abodes of their gods or their ancestral spirits, and that they serve as sanctuaries for all living things (plants and animals, including humans). Any plant that inhabits a grove, or animal that enters it, receives automatic protection from the gods, and cannot be harmed or destroyed or even taken out without the permission of the custodians.

To support this belief, a number of traditional regulatory mechanisms, which have been reinforced by indigenous religious beliefs, practices and taboos – that is, a combination of prohibitions and restrictions – have been instituted to regulate the entry and use of the resources in the groves. This has led to their eventual preservation and protection over the years. Some of these dos and don'ts,

Fig. 1 Bird sanctuary at Jaagbo grove

which are of great significance in the conservation of nature, are therefore highlighted and serve as reference points for environmental education and development interventions.

In this regard, the four major factors that bring about environmental degradation and resource depletion in the Ghana Guinea savanna zone, and which form the basis for the traditional management of sacred groves, include the following:

* The gathering of dry fuelwood and cutting of trees in the sacred grove for any purpose is strictly prohibited, except in rare cases where prior permission may be sought from the custodians to cut parts of trees or shrubs for medicinal and other specific purposes. It is believed that food cooked with firewood from a sacred grove could result in the death of those who eat the food. Similarly, certain trees such as Diopyros mespilifomis (ebony) and Adansonia digitata (baobab) are believed to be homes of the ancestral spirits, fairies and gods, or are used for burying the dead, and therefore should not be cut or felled inside or outside the grove for any purpose, including for firewood. However, for medicinal uses, permission could be sought from the trees themselves after certain incantations.
* No wilful burning of the forest or setting of bushfire is permitted in the groves, as this practice is likely not only to expose the grove but also to burn the ancestral spirits or scare them out of their usual peaceful abode. To prevent accidental fires the people themselves come out in the dry season to create fire breaks or belts around the groves.
* As it is a sacred sanctuary, the hunting of all types of fauna is prohibited within the grove. Certain animals, which are symbols of the various sacred groves, can neither be killed nor eaten in the communities whether they are in the groves or not. For example, it is believed that the gods may take various animal forms. In the Jaagbo grove area where the god is symbolized by a leopard, the killing and eating of leopards, lions, crocodiles and alligators is a taboo or prohibited.
* All forms of land use including farming in the core areas of the groves is strictly prohibited, thus land encroachment by farming is reduced.

Rituals

A number of rituals are performed in the pacification of the grove. However during routine pacifications, outsiders and strangers are not allowed to see what happens in the core area of the grove. Actual sacrifices can only be witnessed by a selected core of indigenous persons.

A few external rituals however take place when a new custodian to the grove is appointed. He is often carried shoulder-high amidst drumming and dancing to a hill near the grove, believed to be the ancestral burial ground. The people carry tree leaves and branches and dance round the hill three times before making their sacrifices, first on top of the hill and later to the Jaagbo shrine.

In several other cases when ritual sacrifices are to be performed by individuals outside the clan, the sacrificer simply sends a fowl, goat, sheep or cow and makes a wish while his/her hand is on the animal's back, later presenting it for slaughter to the gods. Whichever animal is first presented, a fowl is often the last to be offered. Following its slaughter, if the fowl finally falls on its back facing the skies after its struggle, this signifies that the gods have accepted the sacrifice.

Conservational practices and traditional management

The structure, function and traditional management of sacred groves may be likened to the modern concept of biosphere reserves, with core, buffer and transition zones. The biodiversity of the core area is completely protected in the case of sacred groves by the indigenous people themselves through their religious beliefs, practices and prohibitions.

In the core zone, no cutting of trees, killing of animals, setting of bushfires or farming is permitted. The only occasion in which people enter the core zone is during special festivals, annual sacrifices to the fetish or with permission, in which case the person would be accompanied by the custodian or his/her representative.

The buffer zone is the area immediately surrounding the core zone where limited human activities are permitted. It is the area where conservation activities leading to the judicious use of the resources are practised, and has the potential for research, tourism and education. With regards to the Jaagbo grove, it is found that this is the area with the greatest biodiversity, and where the natural resources are under threat of overexploitation to the detriment of the core area of the groves. It is the area where a lot of intervention activities were undertaken by CIPSEG and other projects.

The transition zone is the area outside the buffer zones, and includes settlements, farmlands and other land uses. This is where environmentally sound land-use practices such as agro-forestry, community and individual woodlots and fodder banks are established.

The establishment of these sacred groves in certain sensitive ecosystems including river banks, streams, ponds, mountains and forests has helped to preserve the biodiversity of these areas and serve as gene pools for plant seeds and seedlings available for regeneration in the degraded areas of the groves.

The practice of leaving a number of trees standing for sacred or economic reasons, and the incorporation of various farming systems alongside these trees, serves as a

basis for agro-forestry interventions such as mixed cropping. The prohibition of hunting in the groves, which serve as wildlife sanctuaries for the rapidly diminishing populations of birds, mammals and reptiles, is an important conservation practice. The non-burning of these groves has assisted in maintaining the biological diversity in the groves to the extent that the laws of nature are fully operational in these groves, hence the soils are much richer in nutrients. The custodians of these groves ensure that people found contravening the regulations are sanctioned.

Contribution of the site to sustainable development

The biodiversity in the Jaagbo grove was first identified by the staff of the Environmental Protection Agency in 1992. In collaboration with other stakeholders the CIPSEG project undertook some preliminary studies and activities within the Jaagbo grove and its environs. The studies revealed that the Jaagbo grove and its buffer zone had about 220 species of plants, of which 169 species of plants representing fifty-five families belong to the class of dicotyledons, while fifty-one species representing fourteen families belong to the class of monocotyledons. This is compared with only sixty plant species in the underlying areas. Out of these species, 60 per cent of the plants were found to be of medicinal value to the local people, and could serve as a gene pool for the propagation of medicinal plants.

The grove also has an amazing diversity of animals, particularly birds (fifty species), small mammals (six species), reptiles (six species) and a variety of insects, which offer an unique opportunity for sustained educational studies and eco-tourism. The thickets of riverine forest or woodland in the middle of a degraded environment and stream bed provide a permanent source of water for humans and livestock, and also serve as a home for crocodiles and other reptiles. In the immediate vicinity of the grove (about 400 metres east) Chilifoyili and a dam is located containing numerous crocodiles and a mystery baobab tree where it is believed that many years ago a chief in the area rode a horse up and down its trunk to locate enemy positions during a war (Figure 2). The tree still bears the hoof marks of the horse on its trunk. For visitors or people interested in nature, the variety of savanna plants and animals, and particularly the birds taking sanctuary in the grove, are a delight to watch.

The Jaagbo grove provides a number of other social and economic benefits to the community.

* The stream stores water at specific points for various human uses and for animal watering.
* The forest provides a variety of plants, which, with permission from the custodians, are utilized for medicinal and other purposes.
* The Jaagbo grove, including some other traditional (*Dagbon*) areas, is known and revered in the Tolon area for its ability to assist individuals in need of becoming prosperous, or it bestows healing power when sick people with peculiar diseases request assistance.
* Childless couples also solicit assistance from Jaagbo to enable them to bear children.
* In times of erratic rains and looming bad harvests and famine the grove is often consulted to provide abundant rains and good harvest.
* The grove forest is also a source of wild fruits and berries which children harvest for food.
* It reaffirms the local belief systems of the local communities and serves as a unifying spiritual force for their protection and social values empowerment.

Contribution of the Jaagbo grove for sustainable community development

The Jaagbo grove is surrounded by four local communities. It brings people together for their annual event of sacrifices, and this fosters peace and unity in the area and thus assists community development.

Over 60 per cent of the plant species within the Jaagbo grove were found to be of medicinal value to the local people. Herbalists in the area were assisted in identifying these plants, which now serve as important genetic planting material in the buffer and transition zones for future use. The herbalists were trained in the sustainable harvesting of herbal plants to enhance natural regeneration of the buffer zones. Consequently, about 40 acres of land was reclaimed through natural regeneration. Enrichment planting of the buffer zone using indigenous plants and some exotic species (14 acres) was also undertaken in tandem with community members.

With respect to sustainable land-use strategies adopted by stakeholders, who are mostly farm families and community groups or individuals, over 359 acres of agro-forestry, multipurpose woodlots and fodder banks were similarly established by the community members or households. Women have been actively involved in the agro-forestry and multipurpose woodlot development schemes. Women groups were given choices to plant as much cashew or acreage of woodlot as they could capably manage.

The improvement of the grove area continues alongside alternative income-generation training offered to fringe communities, thereby redirecting the energy of the local people from resource exploitation to its judicious use. Beehives and training on apiculture were given to communities surrounding the sacred groves.

Training of women in agro-processing was undertaken on a limited scale. but past projects (e.g. CIPSEG) failed to assist them in establishing small-scale ventures. These showed that there is a need to provide credit to the women's groups to enable them to undertake income-

generating ventures. Training was also provided in the construction and use of fuelwood-efficient stoves to reduce fuelwood utilization and improve agro-processing by women's groups.

Following this initiative, in another intervention the UN Development Programme (UNDP)/Ghana Capacity 21 Programme collaborated with the regional office of the Environmental Protection Agency (EPA) to further undertake the improvement of the Jaagbo grove for education and eco-tourism. Consequently over the project period the following activities were carried out: the provision of a gravelled footpath or pathway to guide visitors; the identification and labelling of various trees within the grove with their scientific and local (*dagbani*) names, and medicinal and other uses by the local people; the establishment of a crocodile habitat in the streambed and a bird sanctuary for bird watchers; the promotion of school and public excursion groups to the grove area.

Due to these initiatives, there have been marked transformations of the Jaagbo grove and its environs to the point where the biodiversity it contains can be appreciated by scientists, schoolchildren and the general public through eco-tourism excursions. If the number of visitors to the site or area improves it could generate income for the district assembly and the local people.

Challenges and opportunities for conserving cultural and biological diversity

In most parts of northern Ghana the environment is very degraded and sparsely covered with trees, except for some of these isolated patches of sacred groves, and economic trees like *Parkia biglobosa* (*Dawadawa*) and *Butyrospermum Paradoxum* (Shea butter tree). The combined effects of deforestation caused by extraction for fuelwood, building poles, poor cultivation methods particularly slash and burn, overgrazing by livestock and annual uncontrolled bush fires are to be blamed for the current situation.

These sacred groves, which have been jealously protected by the people through strong traditional religious ties and beliefs or taboos, are now threatened by these factors while at the same time experiencing pressure from modernization and modern religious influences. They are therefore under threat of diminution in size and ultimately destruction. Similarly the lack of distinct demarcation between the buffer and transition zones of the grove often leads to encroachment by farmers and wood gatherers into the buffer area, thus putting pressure on the resources in the buffer zone.

Some opportunities also exist for the development of the grove and the fringe communities. These include:

* the need to extend the experiences and accomplishments of the Jaagbo grove to rehabilitate other groves in order to conserve the biodiversity they contain through natural regeneration and enrichment by planting local and exotic species
* the study or development of appropriate propagation methods of some indigenous plant species of medicinal value so that they may be propagated outside the grove
* continuation of appropriate land-use packages, including agroforestry, and multi-purpose woodlot establishments for other interested communities and households
* continuation of activities to control bushfires, an increase in the use of fuelwood-efficient stoves and improvement of soil conservation practices
* empowerment of women, for instance by granting credit to women's groups, and providing training in alternative income-generating ventures
* sustained education and training in savanna ecosystem management, including rangeland and fodder development.

Conclusion

With sensitive ecosystem management initiatives like the CIPSEG project, which deal with very sensitive sociocultural issues like sacred groves, and which seek to utilize science in explaining and evolving locally acceptable solutions to traditional cultural practices, information-sharing and regular consultation with the stakeholders helped to erase suspicions and misunderstandings that could arise during the course of project implementation.

Thus to ensure the sustainability of any such project, local management structures must be developed at the grassroots level. In this regard, the district assemblies of local policy-makers were actively involved through seminars and meetings, and they were integrated into aspects of the project activities. This was in particular reference to their possible role in enacting bylaws to support and reinforce some of the unwritten traditional laws, to assist the custodians in effectively protecting the sacred groves because of their ecological, tourism and socio-cultural relevance.

It must be recognized that the survival and future sustainability of sacred groves and the biodiversity they contain lies in sustained efforts to support the traditional mechanisms that have protected these groves to date. This can be done through education and raising awareness of the communities to reinforce the positive attributes of the groves, and by relevant bylaws to support some of their religious beliefs and practices. There is also the need to provide alternative livelihoods to the local people to divert their attention from overdependence and exploitation of natural resources, and to their judicious management.

Fig. 2 Mystery baobab tree [above]

Fig. 3 Bee hives: An alternative income-generation activity in Jaagbo grove [below]

Managing sacred groves: CIPSEG project

The project therefore focused on a number of activities including the following:

* A detailed study and analysis of the biodiversity of the existing cluster of three sacred/fetish groves, namely Malshegu (Kpalvorgu), Yiworgu (Kuntili) and Tali (Jaagbo) groves, was undertaken.
* In-depth sociological and socio-economic studies in the three selected districts were conducted. In particular, socio-economic constraints facing the farmers and their immediate needs were assessed in terms of agricultural land-use and environmental resource requirements.

The results of the studies served for meaningful applied research, demonstration of land use options, and education and training programmes aimed at improving the stressed ecosystem.

Below are some of the relevant findings and accomplishments:

* There are more species in the buffer area than the core areas of the sacred groves, but both zones in the case of the Tali (Jaagbo) areas contain over 220 different plant species, as against about 60 species in the adjoining areas. Also, 169 species of plants representing fifty-five families belong to the class of dicotyledons, while 51 species representing fourteen families belong to the class of monocotyledons.
* Over 60 per cent of the tree species in the groves were found to be of medicinal value to the local people living in nearby communities. The herbalist in the area and researchers worked together to identify the medicinal plants and have produced a list of local plants, their local names (in Dagbani) and local uses, and where possible, scientific names of the various species identified.
* The Jaagbo grove serves as an important source of genetic planting material, found in both the buffer and transition zones.
* A list including the various uses of most plants identified was also provided to help decide which ones needed to be propagated.
* Natural regeneration of buffer zone gene pool enrichment processes, or *in situ* regeneration of the buffer zones, was carried out. Consequently, about 40 acres of land was reclaimed through natural regeneration. Enrichment planting of the buffer zone using indigenous plants and some exotics (on 14 acres) was also carried out.
* Income generation by women's groups in agro-processing was introduced.
* With respect to sustainable land-use strategies adopted by stakeholders, who are mostly farm families and community groups or individuals, over 359 acres of agro-forestry, multipurpose woodlots and fodder banks were similarly established.
* Women have been actively involved in the agro-forestry and multipurpose woodlot development schemes. Women were given choices to plant as much cashew or acreage of woodlot as they could capably manage. Women's groups in Yiworgu and Yeplasi communities were for example assisted in planting over 12 acres of multi-purpose woodlots for themselves.

Biodiversity enrichment/natural regeneration:	40 acres
Agro-forestry	242 acres
Multipurpose woodlots	32 acres
Fodder banks or enriched pasture or rangelands	44 acres

The areas improved include:

In all its dealings with the community, CIPSEG has shied away from the conventional agro-forestry packages familiar to people. In this regard the type of tree species to be used in combination with food crops was chosen by each farmer depending on his or her needs. Here the planting of cashew with other food crops or in combination with fast-growing trees was a popular choice because of its economic and other agronomic adaptive significance. Since land is scarce in these areas, maximum utilization of land was stressed and farmers were encouraged to do more boundary planting to demarcate their farm boundaries.

Another group of twenty local women from Kumbuyili have been pivotal in the success of the land-use activities. They were trained in basic nursery management and have helped produce almost all the 1994 and 1995 CIPSEG seedling requirement of about 20,000 seeds. They were encouraged and further trained to undertake the nursery management and production as an income-generating activity. An adult literacy class was also arranged for them to enhance their communication, numeracy and literacy skills.

Information sharing, education and training

The above achievements of CIPSEG could not have been made without the active involvement and participation of people at all stages of the project. Systematic information sharing, education and training programmes have been undertaken preceding every intervention stage. With an insightful project like the CIPSEG that deals with very sensitive

sociocultural issues like sacred groves, and which seeks to utilize science in explaining and evolving locally acceptable solutions to traditional cultural practices, information-sharing and regular consultation with the stakeholders helps to erase suspicions and misunderstandings that arise during the course of the project implementation.

It is vital to raise awareness among the people about the need to conserve biological diversity through the awareness of environmental problems, and above all, to provide education for the people to acquire necessary knowledge and skills for the management of their degraded areas or changing their attitudes to adequately appreciate the environmental problems and become actively involved in their solution.

The channels of communication used in reaching the target audiences in the operational area and the nation at large have been a series of group training activities on themes and topical issues, workshop/seminars, team leader coordination meetings, village-level focus group discussions, village durbars, radio programmes and mass education through video documentaries.

A number of group training and educational activities were undertaken on various issues including sustainable land-use strategies, training on agro-forestry and woodlot establishment, group training on bushfire control and dry season ruminant feeding and management.

Mass communication programmes also served as useful channels for awareness creation. In this respect three Dagbani radio discussions were recorded on aspects of the project, whereby stakeholders shared their experience with the wider public on various topical issues like bushfire control, fodder bank development and agro-forestry.

The project management recognized that to ensure the sustainability of the project, local management structures must be evolved at the grassroots level. In this regard, the district assemblies – which are local policy makers – are greatly involved though seminars and meetings, and integrated into aspects of the project activities. Particularly important is their possible role in enacting bylaws to support and reinforce some of the unwritten traditional laws, to assist the custodians to effectively protect the sacred groves because of their ecological and sociocultural relevance.

Future of the CIPSEG project

The CIPSEG project could not secure a second phase to complete most of it activities as a result of unforeseen circumstances: the donor agency withdrew from the region because of ethnic conflict. The activities yet to be continued therefore include:

* extending the experiences and activities of CIPSEG areas and people to rehabilitate the groves and conserve the biodiversity they contain through natural regeneration and enrichment planting of local and exotic species
* the study and development of the methods of propagation of the some of the indigenous plant species of medicinal and other importance, and propagating these in the underlying area
* continuation of land-use packages including agro-forestry and multipurpose woodlots in order to reach more communities within the three districts
* continuation of activities to control bushfires
* uncompleted scientific studies
* activities aimed at the empowerment of women, such as credit to women groups and training in income generation
* sustained education and training activities to ensure savanna ecosystem management, for example rangeland and fodder development.

Jaagbo Sacred Grove Development Plan Gha/02/004

All these sites in and around the grove when developed will serve as tourist attractions, and when properly managed could bring some benefit to the district assembly and the local communities surrounding the grove.

A second intervention through the UNDP/Ghana Capacity 21 Programme provided resources for some activities, which further improved the Jaagbo grove. The activities undertaken during this later programme were aimed at improving the Jaagbo grove for educational studies and eco-tourism. In this regard a pathway lined with stones and gravel was constructed within the buffer zone of the grove, and some of the trees were identified and labelled with their scientific and local (dagbani) names and uses.

A crocodile pond and a bird sanctuary were identified and prepared for viewers. Other community-based income-generation activities such as beekeeping were undertaken for custodians. Training in tree growing and agro-forestry including cashew plantation development were provided for interested communities but could not be expanded within the one rainy season.

This project on UNDP/GOG Environmental Resources Management Programme (ERMP) provides an opportunity for the continuation of the UNDP/Ghana Capacity 21 Programme initiative in the Tolon-Kumbungu district.

The improvement or transformation of the grove should continue alongside proposals for alternative income-generation or the provision of poverty-alleviation programmes in the fringe communities in order to substitute income generation for resource exploitation.

Training could also be provided in the efficient use of resources and the provision of tree species for future firewood and timber requirements.

Portrayal of the traditional beliefs and traditions of the indigenous communities of the Jaagbo grove

Sacred groves are the abodes of the gods and must not be disturbed by humans. The gods can take many forms such as animals, humans and insects, and move in and out of the grove to interact with people at any time of the day, or they may assume non-living forms such as wind (whirlwinds). Therefore, the gods must have easy access into the grove and outside it at any point, north, south or west.

Traditionally the people believe that the grove offers protection to the traditional area of the people of Tolon in particular and the Dagomba people in general, from war and other disasters including disease outbreaks if appealled to through sacrifices. In times of poor rains Jaagbo can be called upon for more regular rains, abundant harvest and hence to reduce famine. Traditionally the Jaagbo grove must be pacified before other gods in the area. This is because Jaagbo is revered by the people as the senior god which overseas the activities of the other minor gods in the area. When an indigenous person of the Tolon area is lost he or she can appeal to Jaagbo and he or she will be relocated to the desired location. When appealed to by carrying out prescribed sacrifices, Jaagbo can make a person wealthy, but when such a wish is granted the gods must be pacified immediately.

Other traditional beliefs, consistent with modern biodiversity conservation and which ensure the Jaagbo Grove continues to be what it is today, include:

* All animals in the grove are automatically protected and cannot be hunted. Even animals outside the grove that run inside in times of danger become protected.
* Where animals are accidentally killed pardon should be sought from the *Tindana* (fetish priest). Such animals must be roasted or cooked and eaten within the grove and cannot be taken home.
* No bush-burning in the grove is permitted as such practices destroy the abodes of the gods, including the plants and animals that protect the gods.
* No cutting of trees for any purpose including cooking. Where a tree has to be harvested for specific reasons, including for medicinal uses, prior permission must be sought from the *Tindanas* or custodians of the grove. This practice however is now being abused because of modernization and the erosion of traditional beliefs and other religious beliefs.
* Strangers or foreigners to the area can only enter the grove when accompanied by someone appointed by the *Tindana* or with the permission of the *Tindana* and elders. Failure to abide by this rule often leads to snake bites, or a strange disease will befall the culprit.
* For visitors or people interested in nature, the variety of savanna plants and animals, particularly the birds taking sanctuary in the Jaagbo, are a delight to watch.

Development of the grove to enhance its socio-economic status

The Jaagbo sacred grove has experienced several interventions since the 1990s. The first comprised activities with a limited scope by the UNESCO-CIPSEG project mentioned earlier, in which the following core activities were undertaken:

* A workshop on tourism development was organized for the members of the district assembly, traditional rulers and opinion leaders, decentralized departments and non-governmental organizations (NGOs) in the district, to assist in identifying other tourist attractions in the district to complement the Jaagbo grove initiative. At this workshop about eleven potential tourist sites were identified. Follow-up would involve visiting and identifying the sites to determine their potential and recommend some actions for their improvement.
* In terms of benefits to the people, some assistance was provided to some farmers to establish multi-purpose woodlots and agro-forestry systems, and this needs to be expanded to benefit about 100 farm families.
* In terms of the provision of alternative income-generating activities, only the custodians benefited, with each of the four communities receiving two beehives and beneficiaries trained in beekeeping. Over the past year beekeeping has generated a lot of interest and more beehives could be provided to benefit other people (Figure 3).
* Training of women in agro-processing was undertaken on a limited scale but the project could not assist them to establish small-scale ventures. Hence there is a need for financial credit to the women's groups to enable them to undertake income-generating ventures.

During focus group discussions with the local people at Jagriguyili and Apleyili, the men and women's groups were asked what they would like to see the new project achieve and how they saw the improvement to the grove and their own lives. The following points were recorded:

* The Jaagbo grove is very important to them, hence all efforts should be made to continue to improve the biodiversity in the grove and to protect and expand on what it has to offer.
* In this regard, the people suggested the establishment of boundary trees to demarcate the limits of the grove. That current encroachment into the grove to cut trees is being committed by persons with different religious beliefs who do not believe in the Jaagbo shrine. They

therefore suggested the enactment of bylaws by the Tolon-Kumbungu District Assembly to back their efforts at managing the grove.

They further suggested the following:

* Construction of more beehives and training of beneficiaries for beekeeping, since more people are interested in beekeeping.
* Engagement of young people to patrol the grove area on a rotational basis.
* Enforcement of the traditional management systems already being practised, such as:
  - no cutting of trees for any purpose including dry wood.
  - no hunting of animals of all types within the grove.
  - covering of roots of plants after harvesting for herbal preparation.
  - no setting of bushfires that could destroy the grove accidentally or otherwise.
* The people also complained of the lack of potable water, except at Chilifoyili, and therefore requested potable water in the form of boreholes and hand-dug wells fitted with pumps.

As most of the local people are farmers they believe that if they were assisted to improve their agricultural output this would help them generate the income needed to meet the social and economic needs of their families, and enable them to better protect the grove. These are some suggestions:

* Assisting the farmers to regenerate their degraded farmlands by providing knowledge or skills in organic fertilizer/manure production and utilization, to enable them to producing legumes etc. alongside appropriate agro-forestry practices.
* The farmers equally want to be assisted in obtaining multi-purpose tree seedlings, including fruit tree seedlings such as mango, cashew and others such as teak, neem and cassia, which are often used as rafters and can be harvested for this purpose within four to five years. The farmers also blamed their current low levels of agricultural production on the poor and difficult soils, and suggested assistance to engage tractor services to plough and loosen the soil, so they can improve and expand their cultivated land.
* A focus group discussion with the women also unearthed their aspirations for the new project and how they can be assisted to improve their economic status. They indicated that the few interventions that have come to the communities were mostly targeted at men. The women indicated that their interests are in agro-processing of rice, shea butter and vegetable production. The women want to be provided with skills to engage in other income-generating activities such as soap and pomade making and vegetable gardening.
* Each of the four communities already has a women's group numbering between fifteen and twenty women, who are working and contributing towards their common good. They need financial credit to improve their situation.
* The women want to be provided with credit or loans to undertake various small-scale business activities so as to generate income for their families.

Tsodilo, a cultural landscape in the Kalahari: symbolic and religious significance

Phillip Segadika, Botswana National Museum, Botswana

Summary

Tsodilo, the mountain of ancestral spirits, is located in the North West District of Botswana. Rising majestically from the surrounding expanse of the Kalahari sands, Tsodilo is Botswana's second highest peak at 1,395 m. It is a National Monument currently protected by the Monuments and Relics Act of 2001, and first protected under the 1934 Bushman Relics Act. It was declared a World Heritage Site in 2001 on criteria (i), (iii) and (vi) of the cultural landscape category of the World Heritage Convention (WHC)[1]. This paper highlights the significance of Tsodilo's symbolism in the context of criteria (vi) (the intangible aspect of Tsodilo heritage), and proposes factors to be considered in a model for managing the intangible heritage of related African World Heritage Sites. To illustrate this, the paper will also analyse the nomination dossier, International Council on Monuments and Sites (ICOMOS) suggestions, and the current management plan for Tsodilo in terms of its intangible cultural heritage.

Introduction

As proof of the cultural significance of Tsodilo, the local shamans, guides and herbalists point to specific areas that are claimed to show the marks of the first animals, the first people, the site of the first sexual act, as well as the first and eternal water spring in the Tsodilo landscape. An ongoing study suggests that an apparent conflict on the interpretation of the history of the rock art between the Jun/hoasi and Hambukushu communities has been solved by a conservation plan rooted in cosmology, which supersedes and unites the politics of ownership.

The intangible heritage of the Jun/hoasi and Hambukushu communities at Tsodilo in relation to the Tsodilo World Heritage Site is illustrated, among others, by the three main components of rituals and performances, taboos, and stories of the genesis of life and the landscape. The rituals and performances are exemplified by Jun/hoasi trance dances, Hambukushu rain-making songs, poems and chants, the collection of spiritual waters and cleansing ceremonies. The taboos are demonstrated by some of the traditional common law dos and don'ts that manage human conduct in, and access to specific spots within, the Tsodilo landscape. For instance, unnecessary and frequent visits to the hills are seen as disrespectful of their sacredness. Furthermore, it has been pointed out that rain-making sites are out of bounds to members of the local community following the rain-making ceremonies (Thebe, 2002). However, perhaps the most vivid aspect of the Tsodilo site remains the stories pertaining to the 'history' of the hills and of the origins of life in Tsodilo.

The genesis of the Tsodilo hills: geology

From a regional geological perspective, Tsodilo is located within a prominent, continental-scale geological element of the earth's crust called the Pan-African system of belts. The rocks of these belts are from 800 to 500 million years old, and

represent geological periods from the Neoproterozoic to the Lower Palaeozoic. They originally formed a system of mountain chains similar to today's Alps, Apennines and Carpathians. Many millions of years of weathering and erosion have destroyed the elevated parts of these ancient belts, but the lower parts have survived. One of the segments of this Neoproterozoic/Lower Palaeozoic system, the Damara belt, begins in Namibia to the south-west, crosses north-western Botswana and extends further north-east towards Zambia and Congo, where it is called the Katangan belt. The Tsodilo rocks have recently been reassessed by Key (1998), who calls them the Tsodilo Hills Group and proposes a possible Palaeoproterozoic age (of more than 1,500 million years). The literature seems to be consistent that the Tsodilo is older than the Damara succession, and therefore should be considered as an older terrain within the Damara belt geological province. Tsodilo is one of a few localities where very old rocks uplifted by tectonic forces have resisted many million of years of weathering and erosion.

Origins of the hills: a Hambukushu legend

If that sounded a little too complicated or confusing, a Hambukushu legend provides a more direct interpretation of the origins of the Tsodilo hills. The Hambukushu believe that the Tsodilo was once a family. The three main outcrops that make up the Tsodilo hills are known by them as the male, female and child hills. The male hill is the most erect and highest of the three hills, and mostly barren. The female hill is the second highest of the hills, with gentler slopes, the most trees (used economically for their wood and fruit), tubers and edible roots. The female hill also contains the most water springs and rock paintings. Lastly, the child hill is the smallest of the three outcrops. This naming of the Tsodilo is analogous with the naming of the Palatswe hills among the Batswapong of East Central Botswana. In both instances, the size of the hills prompted the use of social and family stereotypes. However, even more curious for both Tsodilo and Phalatswe hills is that the smallest of the three hills is referred to as a child whose gender is not categorized: perhaps a deliberate choice, because the languages have very distinct gendered terms for male and female children.

Tsodilo, the cradle of creation?

According to the local Jun/hoasi people, Tsodilo is the place where all life began and so it is the abode of all the spirits of living creatures.

The first animals

The most popular trail at Tsodilo is the 'Rhino trail' on the female hill. From the valley this leads to a slippery route of granite boulders up the hill to a Nqoma Iron Age archaeological site. Local guides show visitors the 'footprints of the first animals'. These features are grooves ranging from 5 to 20 centimetres long. They are barely 2 cm deep and mostly 3 cm in width. They occupy an area of about 80 sq m, and occur mostly in pairs or sets of four grooves, where it is most slippery. Archaeological interpretations would describe these as engravings or even 'post sharpening or shaping marks'.

Legend has it that the 'animal hooves' are those of the very first animals, which were dropped from the sky by Nyambi, the perfect one. This activity took place while the Tsodilo rocks were still soft, and the marks were made as the animals were descending the hills to the first water hole on earth (the remains of which are still there). The reason some of the grooves are longer than others is that the animals tended to slip as they descended. To 'prove' that they fell from the sky, the local guides show visitors the locality where they were all dropped. The area is represented by indentations on the rocks showing the impact of their fall. These hollow spaces are distinct circular indentations about 15 cm deep and 15 cm diameter on average. Geologists ascribe the holes to water action and erosion of less resistant parts of the rock formation (Gabadirwe, personal communication).

The eternal water spring

On the south-west face of the female hill is a popular sacred water spring which has attracted pilgrims to Tsodilo. Those who collect the water use it for ritual cleansing, drinking it and sprinkling on their bodies and possessions.

The site of the first sexual act

This is the spot where in legend the first sexual act took place. It is a granite outcrop on the flat top of the female hill. Legend has it that the rock was flat until the passion of the first couple, whose action affected the shape of the then-spongy rocks.

The origins of the art

The rock art on the site is the heritage of the present-day inhabitants, and was produced by their ancestors. The Hambukushu see the rock art as a product of their god, the Karunga. It would appear that the Hambukushu do not want to admit that the rock art is the direct product of the ancestors of the Jun/hoasi, as suggested by ethnographic data.

Justification of the state-party for consideration of Tsodilo under criterion (vi)

The justification submission reads thus:

Traditions speak of Tsodilo as being the home of all creatures, more particularly home to the spirits of each animal, bird, insect and plant that has been created.

Though the exact interpretation and dating of the rock art is uncertain, the art itself testifies to the long tradition of the site as spiritual, a tradition that continues today in practices of the Jun/hoasi and through visits by pilgrims (in Western parlance), often from some distance.

The International Council on Monuments and Sites (ICOMOS) World Heritage evaluation document (2005) and summation of the Tsodilo state-party justification attributes the preservation of the site to factors other than the honour of the local communities, 'Three basic long-term facts contribute to Tsodilo's outstanding state of preservation: its remoteness, its low population density and the high degree of resistance to erosion of its quartzitic rock'. In this document, the State-Party and the ICOMOS evaluation shy away from explicitly acknowledging the contribution of the preservation of the rock art to local veneration of the hills. The nomination report, perhaps cognizant of the fact that the final word will be made predominantly by a panel of heritage adjudicators oriented to Western 'science', also bordered on moderation as regards the intricate relationship of the Jun/hoasi and Hambukushu people with the Tsodilo hills.

Information on the dossier

Indeed, criterion (vi) of the WHC could not be considered as a stand-alone criterion at the time of preparation of the nomination dossier. The situation has been steadily changing since then. For instance, the World Heritage Committee meeting in March 2003 recommended that cultural criterion (vi) be acceptable on its own. It stresses that 'sites may be inscribed which are directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literally works of outstanding universal significance' (Rössler, 2003, p. 66). This will cause a major deviation from its previous and existing reluctance to take this stance, and calls for a deliberate bias by applicants to 'consider the intangible dimensions in the context of the relationship to physical heritage' (Luxen 2000, p. 2).

The 1994 Tsodilo Hills Management Plan and intangible heritage

The 1994 plan was the first major and organized approach to Tsodilo in modern management terms. It was generally an 'in-house' management plan, based on discussions by National Museum staff at Tsodilo and in Gaborone, the capital city. The main purpose of the plan was to carry out a feasibility study for the physical implementation of the project (infrastructure, trails development, land use by residents, conservation needs for the heritage, tourist control, and recommendations for enhanced management of Tsodilo). No discussions were held with the local community (at least not by the consultant) on their contribution and their part in the management of Tsodilo.

Not surprisingly therefore, the management plan focused more on 'conservation needs of the heritage and facilities for tourists' (Campbell, 1994), while excluding the local communities. The best that came from the document as regards intangible heritage was to recommend that 'oral history of the communities, their recent and current lifestyles' be included in the research programme for Tsodilo.

The nomination dossier

The Tsodilo nomination dossier was, like all nomination dossiers, a project to do as much as possible to convince the World Heritage Committee that the site is worth listing as a World Heritage Site. It sets out to exploit as far as possible, and provide information for, all the criteria that appear on the nomination list. Standing out very clearly on the nomination dossier is reference to criterion (vi) of the World Heritage Convention. However, another very noticeable aspect is the absence of recommendations for monitoring the intangible heritage. Rather, the monitoring strategies for the site refer unambiguously and solely to the rock art and staff administration.

Intervention and implementation so far

The research and management interventions at Tsodilo since 1994 have entailed the following:

* Twenty archaeological excavations (at least two annually since 1994).
* A rock art documentation programme that ran from 1994 to 1996. This project was sponsored by the Folkens Museum, Stockholm, and recorded rock art sites, rock engravings, mines and archaeological sites.
* Construction of the site museum and staff housing in 1999 at a cost of US$1 million.
* Employment of the site manager and nine other members of staff.
* A rock art conservation workshop in 2001.

This project, sponsored by the US Embassy in Gaborone, was attended by all Tsodilo staff and others from the Botswana National Museum. The workshop also made recommendations for the proposed Tsodilo management plan review.

The intangible heritage at Tsodilo

The quest for intangible heritage is a quest for the revival, involvement and respect of local communities.

Thus far, it has been illustrated that the management and approach to the intangible heritage at Tsodilo have been virtually nonexistent. Given this existing rather gloomy situation, a deliberate attempt is made here to suggest ways and means of exploiting existing structures, the unique setting of Tsodilo and the World Heritage principles and tools to manage the intangible heritage of Tsodilo.

Existing local structures and the unique Tsodilo set-up

Current management plan review

The ongoing management plan review has made deliberate efforts to involve the local communities at all levels, both representative and participative.There has also been intense consultation with a regional community-based non-governmental organization (NGO) which has collaborated with the community to come up with a document on community initiatives for Tsodilo.

The Tsodilo Site Museum

The permanent exhibition at Tsodilo has two components, 'Tsodilo' and 'My Tsodilo'. The first exhibition, entitled 'Tsodilo', is a celebration of the physical landscape, geology, archaeology and rock art of Tsodilo. It therefore has both archeological and ethnographic artifacts, and pictorial presentations of Tsodilo and the region. The purpose of the other exhibition, 'My Tsodilo', is to present the experiences of the people who have interacted with Tsodilo. It therefore includes quotes from about twenty-five interviewees, including the local community, tourists and researchers. Selected Hambukushu and Jun/hoasi stories and experiences are displayed in an unbiased exhibition (in terms of space and status) along with information from the researchers. The Tsodilo Site Museum, as an interpretation centre, is therefore a meeting place of the ideals of the scientists, the local practitioners and custodians of heritage, and consumers: the tourists.

Visual and performing arts festival

The budget of the Botswana National Museum provides an annual allocation for a national visual and performing arts festival. Since Tsodilo Site Museum is now designated a distinct station and the only other national museum in the country (the rest being community regional museums), this funding has been extended to Tsodilo. The Tsodilo annual visual and performing arts festival will entail community celebration of the intangible heritage at Tsodilo. The day-long programme will allow for the promotion of the intangible heritage of Tsodilo, including poetry, drama, traditional dances, stories, the sacred sites, craft exhibitions and visual arts competitions. (Tsodilo rock art is itself viewed by some as a monumentalizing of the intangible, in that some of the paintings are ascribed to trance-ridden medicine men.)

It is expected that this festival will go a long way in the promotion of community ownership, participation, and the revival and transfer of information to younger generations.

Identifying the threats

Mountain of 'the God' or mountain of 'the Gods'

The monitoring mechanisms for intangible heritage must take into account developments (in the community) that might manifest themselves physically, for example in vandalism. There is a full-time missionary stationed at Tsodilo village, and there are now a growing number of Christian converts. This may be interpreted as a potential 'threat' to the cosmology that has conserved the Tsodilo rock paintings for centuries. Experiences elsewhere in the country shows that some over-zealous Christians vandalized a highly respected cave shrine of the Kobokwe by inscribing on this protected national monument graffiti that read 'Jesus is coming'. Tsodilo has had a similar experience. Some keen individual removed the 's' from the word 'Gods' on the sign at the main gate. The gate sign now dedicates Tsodilo to the 'God' instead of the 'Gods'. The majority of village residents cannot speak, let alone read, English, so this is unlikely to have a significant effect on their attitudes. However, this seemingly minute vandalism is a sure protest sign to watch, because its next manifestation may well cause Tsodilo to be a World Heritage Site in danger.

Strengthening community ownership

Management interventions of World Heritage Sites with intangible values should be geared towards community empowerment and respect of indigenous belief systems on which the conservation of monuments and sites depends.

Some of the immediate benefits for the Tsodilo community have been the full-time employment of eight members of the community, the organization of local guides who levy a standard charge for taking visitors around the site, and the opening of a community curio shop. There is also occasional employment of casual labourers to create fire breaks and for camp and train clearances.

It is difficult to imagine today, but the 1996 official District Development Plan document for the NG6 area, in which Tsodilo is one of ten villages, listed Tsodilo as the poorest one. Today, Tsodilo may well be in the first four in terms of economic viability. The monitoring of community benefits is very important for cultural heritage specialists in areas where politics and international pressure to support 'indigenous' people are the order of the day. However, heritage managers must also communicate this to the community who should be assisted to exploit opportunities that may not be within their traditional use of the monument. Communication and outreach tools could include:

* Use of geographical and landscape survey methods
  - Mapping
  - GPS
* Recording on tape and video
* Identifying inherent opportunities and strengths of the site for relevance:
  - The first sex spot (HIV/AIDS and heritage)
  - Monuments as healing spots for the sick
  - Taking advantage of any unique components of the site for life application today.

* World Heritage in young hands (WHC Education manual for teachers)
* Rock art, hills and the soul of the hills (stories behind)
* Intangible heritage impact assessment.

How have World Heritage Status developments at the site and management interventions impacted on the intangible heritage? The premise here is that before you any impact on a World Heritage Site which has been listed on criteria (vi) can be assessed, there is a need to identify, inventory and categorize the initial situation for monitoring purposes. Items and issues which might be deemed to have an impact include the fence, telephone towers, buildings, and the influx of tourists. Can a World Heritage Site be considered to be in danger on account of diminishing community participation when World Heritage or State-Party interventions have themselves led to the degradation? 'The conservation of some tangibles is critical in that it is a medium that validates, illustrates and in some case prolongs the lifetime of the intangibles that are tied to it.

Conclusion

The importance of intangible heritege will be given impetus by the 2003 decision of the World Heritage Committee to recognize intangible heritage in its own right. However on the ground this calls for the commitment of States-Parties, whose sites are listed under criterion (vi), to review their management systems to ensure that the intangible heritage is appropriately managed. Drawing from the fairly successful but impromptu interventions on the management of intangible heritage at Tsodilo, it has been concluded that there is a need to employ all effective available methods to document and design adequate monitoring mechanisms and to strengthen the factors that assist in the preservation of intangible heritage. Through such ethnological management systems and monitoring tools, managers will be able to rectify the apparent bias towards the 'tangible' heritage.

It has been illustrated here that in some cases the conservation of tangible heritage is critical, in that physical items can be argued to validate, illustrate, and in some cases prolong, the lifetime of the intangible heritage tied to them. The neglect of one component in favour of the other is bound to cause a conflict in management. However, on the whole, the monitoring of intangible heritage will not be unproblematic for World Heritage and other sites.

How far will the World Heritage system go in dealing with intangible heritage? For instance, could a living tradition site be declared a 'World Heritage Site in Danger' on account of diminishing community involvement? The Tsodilo hills in Botswana are a good example of the need for an integrated approach to the management of heritage.

Note

1. Criteria (i): to represent a masterpiece of human creative genius; (iii): to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared; (vi) to be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria.)

References

Bambaru, D. 2002. *Tangible and Intangible: The Obligation to Desire and to Remember*. Paris, *ICOMOS News*, Vol. 10, No. 1, pp. 26–27. (Also available in French)

Campbell, A. S. 1994. *Tsodilo Management Plan, Scheme For Implementation*. Gaborone, Government Printer.

Government of Botswana. 2000. Community Based Natural Resource Management. Gaborone, Government Printer.

ICOMOS, 2005. World Heritage in Africa. Preservation of rock art. Botswana case: a non biased approach. Mpulumbusi, Tjako. Paris, *ICOMOS*. pp. 14–20, illus., plans. (Scientific Journal N. 7: ICOMOS Africa).

Key. R. M. 1998. Geological Map of the Republic of Botswana (1:1,500,000), Geological Survey of Botswana.

Luxen, J-L. 2000. The intangible dimension and the World Heritage List. *ICOMOS News*, Paris, n° 2, 2000, p. 6.

Mosweu, K. 2002. *Tsodilo Participatory Rural Appraisal (P.R.A.)* Project. Commissioned by Trust for Okavango Cultural and Development Initiatives. TOCADI Publications.

Munjeri, D. 2000. Intangible heritage in Africa: could it be mush ado about nothing? *ICOMOS* Newsletter. (2003 ICOMOS web site reprint).

National Museum. 2000. *Tsodilo, Mountain of Gods, World Heritage Nomination Dossier* (unpublished). Government Printer, Gaborone.

Rössler, M. 2003. Enhancing global heritage conservation: links between the tangible and the intangible. *World Heritage*, No. 32, pp. 64–67.

Segadika, P. 2001. Why Tsodilo is a World Heritage Site. Paper presented at the 2002 Tsodilo Rock Art Conservation Management Workshop, Tsodilo, Botswana.

Segadika, P. 2002*a*. Notes for the Proposed Management Plan Review. In press.

Segadika, P. 2002*b*. Developing monuments and the challenges of partnership with communities in Botswana: the case of Tsodilo Hills, Botswana. Unpublished paper presented at the Integrated Territorial and Urban Conservation 02, ICCROM, Rome.

Segadika, P. 2006. Managing Intangible Heritage at Tsodilo. *Museum International*. 58 (1-2), pp. 31–40.

Thebe, P. C. 2002. Tsodilo: Why a Management Plan Review. Unpublished paper presented at Stakeholders workshop, Maun Lodge, October.

UNESCO. 2001. *Evaluations of Cultural Properties*, 25th Ordinary Session (25–30 June 2001) Paris. WHC-2001/conf.205/inf.4

UNESCO Proclamation of Masterpieces of the Oral and Intangible Heritage of Humanity: some examples closely related to nature

Noriko Aikawa, UNESCO consultant, Japan

Summary

This paper first discusses the conceptual development of UNESCO's programme on the Proclamation of Masterpieces of the Oral and Intangible Heritage of Humanity, and subsequently examines four examples of proclaimed masterpieces related to nature.

Creation and future of the UNESCO proclamation programme

UNESCO's programme on the Proclamation of Masterpieces of the Oral and Intangible Heritage of Humanity was established in 1998. The programme developed from a specific case study undertaken in 1996 on the safeguarding of the whole of the popular cultural expressions occurring on the Jemaa el-Fna square of Marrakech (Morocco) over several centuries. This study was examined by a group of international experts in Marrakech in 1997. The experts used the term 'cultural space' to designate the ensemble of popular cultural activities taking place on the square in a concentrated manner throughout the year. They also recognized the urgent need to safeguard this oral heritage, which was threatened with degradation or even disappearance in the era of globalization.

The experts then expressed their opinion that UNESCO should extend its efforts beyond this particular case and consider a global framework for fostering the preservation of different examples of oral heritage still existing worldwide. After observing the popular artists performing on the square, they pointed out the central role that the practitioner communities could play in the different steps of the safeguarding activities. They all agreed that the key to ensuring the preservation and enhancement of this oral heritage was to encourage practitioner communities to continue to practise and transmit their cultural heritage to future generations. From this perspective, they finally concluded that UNESCO should establish a mechanism to grant an international distinction to selected remarkable examples of oral heritage as 'Masterpieces of the Oral Heritage of Humanity'.

UNESCO launched the proclamation programme as an experimental programme while developing, in parallel, a conceptual framework for an International Convention for the Safeguarding of Intangible Cultural Heritage, which was finally adopted by UNESCO's General Conference in 2003. In the course of the process of establishing this programme, between 1997–98, the proposed programme of the proclamation was neither easily understood nor accepted by UNESCO's Member States. A number of lively and controversial debates took place at meetings of UNESCO's governing bodies. The concept initiated in Marrakech, to create a programme focusing on oral heritage, was enlarged to 'oral and intangible heritage'.

The term 'masterpiece' was the subject of controversial debate. Many European countries considered that the term 'masterpiece' should be reserved exclusively for elitist works of art such as Leonardo da Vinci's *Mona Lisa* and could not be attributed to intangible cultural heritage. Meanwhile, many developing countries considered that their intangible cultural heritage should be considered as highly as European masterpieces. They therefore insisted that the term 'masterpiece' be kept. A strong claim to review the concept of 'cultural heritage', and grant recognition to living cultural heritage transmitted from generation to generation on a par with monuments, sites and natural heritage, was laid by African, Asian, Pacific and Latin American countries.

The Regulations of the proclamation programme, including its objectives, selection criteria and evaluation procedure, were finally approved by UNESCO's Executive Board in 1998. The first proclamation took place in 2001, when nineteen masterpieces were proclaimed, and at the second occasion in 2003, twenty-eight were proclaimed. The third proclamation took place in November 2005, when forty-three masterpieces were proclaimed.

Procedure of the programme

The proclamation programme proceeds as follows. Member States send their candidature file, including an action plan to safeguard the activity in question, to UNESCO. It is imperative that the file contains a document proving that the creator/practitioner community authorizes the government to submit the candidature of their cultural activities to UNESCO. Following an administrative evaluation, UNESCO requests competent non-governmental organizations (NGOs) to undertake a scientific evaluation of the proposal. The NGOs are chosen in accordance with the subject matter, such as the International Council for Traditional Music (ICTM), the International Social Science Council (ISSC), the International Council for Philosophy and Humanistic Studies (CIPSH), the International Council of Museums (ICOM), and the International Theatre Institute (ITI). A jury composed of eighteen members, nominated by the Director-General in a personal capacity, examines the evaluation drawn up by NGOs and addresses its recommendation to the Director-General. The Director-General, taking into account the recommendations of the jury, proclaims the selected items as Masterpieces of the Oral and Intangible Heritage of Humanity.

Definitions and criteria applied to the proclamation programme

Initially, a definition of the term 'folklore' (traditional and popular culture) given in the 'Recommendation on the safeguarding of traditional culture and folklore'[1] was tentatively used. As the elaboration of the concept of 'intangible cultural heritage' in the context of an international convention proceeded, a revised definition was applied for the proclamation programme.[2]

The selection criteria for the Masterpiece programme set up by UNESCO's Executive Board in 1998 were as follows:

- cultural spaces or forms of cultural expression having outstanding value
- rooted in a cultural tradition of the community
- with a role in affirming cultural identity, enhancing creativity and intercultural exchanges and contemporary sociocultural role in the community
- excellence in the application of the skill and technical qualities
- unique testimony of the living cultural tradition
- risk of disappearance.

In the first criterion two genres of cultural manifestations eligible to be proclaimed are mentioned: cultural space, and forms of cultural expressions.

The concept of cultural space, elaborated in Marrakech, taking as example the diverse forms of popular culture expressed on Jamaa el-Fna Square, does not mean a physical square or space as such. Its definition is given in the Regulation of the Proclamation Programme as follows:

> For the purpose of these Regulations the anthropological concept of a Cultural Space shall be taken to mean a place in which popular and traditional cultural activities are concentrated but also a time generally characterized by a certain periodicity (cyclical, seasonal, calendar, etc.) or by an event. Finally, this temporal and physical space should owe its existence to the cultural activities that have traditionally taken place there.[3]

It is clear that, in the above definition, the 'physical' connotation embodied in the term 'space' does not bear the same significance as in the case of a cultural landscape. This concept, however, evolved differently in the 2003 Convention, where the term 'cultural space' bears a more 'physical' meaning.[4]

One of the major underlining principles of the proclamation programme is the significant role granted to the practitioner communities. Member States are required to attach to their candidature file a document issued by the practitioner communities authorizing the submission of candidature to UNESCO.

The fundamental role to be played by the communities is also emphasized throughout the selection criteria. This principle also forms the underpinning concept of the 2003 Convention, together with the major characteristics of intangible cultural heritage expressed in the selection criteria of the proclamation programme, such as affirming cultural identity and enhancing creativity, as well as intercultural exchanges, assuming a contemporary sociocultural role and being a living cultural tradition.

Immediately after the first proclamation in 2001, the international jury came across some difficulties in justifying the negative evaluation given to certain candidatures. It proved to be evident that a more precise and detailed description of each criterion was necessary. The jury met in an extraordinary session to elaborate each item of the criteria. The jury realized, in particular, that there was a need to add a new paragraph to the criteria, that 'all the cultural spaces or forms of cultural expression qualifying for proclamation as Masterpieces of the Oral and Intangible Heritage of Humanity must be consistent with the ideals of UNESCO and, in particular, with the Universal Declaration of Human Rights adopted by the United Nations in 1948'.[5] This new paragraph was drafted on the basis of the phrase: 'in accordance with UNESCO's objectives' mentioned in the Regulations.[6]

At this occasion the jury also gave the following definition to the term 'masterpiece' in conformity with the first criterion:

Based on the fact that any culture may hold masterpieces and without restriction by any specific historical and cultural reference, a masterpiece (in the field of the oral and intangible heritage of humanity) is understood as a cultural manifestation of exceptional value, defying any formal rules and not measurable by any external yardstick, which conveys the freedom of expression and creative genius of a people.[7]

After each proclamation, UNESCO provided financial and technical assistance to bodies responsible for the implementation of the safeguarding action plans for the proclaimed masterpieces. The proclamation programme has become increasingly appreciated by Member States, and a growing number of candidatures has been submitted at each occasion of proclamation.

The Proclamation of the Masterpieces programme has helped to raise awareness of the value and the significance of intangible cultural heritage. It facilitated remarkably the early adoption of the 2003 Convention. It has accelerated the recognition of intangible cultural heritage on a par with tangible cultural heritage and natural heritage. It has contributed consequently to enlarging the concept of cultural heritage in general, to encompass both tangible and intangible aspects.

The newly established Convention on the Intangible Cultural Heritage will enter into force after its ratification by thirty countries. The convention is supposed to become effective before the middle of 2006. As one of the principal ways and means to promote the safeguarding of intangible cultural heritage at the international level, the Convention proposes to establish two lists: a Representative List of the Intangible Cultural Heritage of Humanity, and a List of Intangible Cultural Heritage in Need of Urgent Safeguarding[8]

Once the Convention enters into force, the proclamation programme will cease to exist and the proclaimed Masterpieces of the States Parties of the Convention will be incorporated into the Representative List of the Intangible Heritage of Humanity as stipulated in the text of the Convention.[9]

The criteria of the Masterpieces Programme will by no means prejudge or influence the criteria for the Representative List of the 2003 Convention, which will be established by the Intergovernmental Committee. For example, the definitions of 'outstanding value' in the first criterion and of the term 'masterpiece' might not be retained, or might be substantially modified, as they have been subjects of debate throughout the proclamation process. In the field of intangible cultural heritage, it is difficult to qualify only certain selected cultural expressions of 'outstanding value'. All the submissions are of outstanding value for the practitioner communities. The question is 'who judges for whom' and 'by what yardstick is outstanding value measured'. The international jury, in spite of the innovative definition it gave to the term masterpiece, has been confronted with difficulties in giving judgment under this criterion.

Masterpieces in relation to nature

The breakdown by domain of the forty-seven masterpieces proclaimed by 2003 is as follows:

- cultural spaces: 7
- oral traditions including languages: 10
- performing arts including music: 19
- rituals and festive events: 7
- knowledge and practices concerning nature and the universe: 2
- traditional craftsmanship: 2.

This breakdown reveals that only two examples out of forty-seven masterpieces are connected with the knowledge and practices concerning nature and the universe. If we add two other masterpieces related to languages and oral traditions but also to nature, we could consider that four masterpieces are related to nature. It is worth pointing out that all of these are cultural expressions of indigenous people which are threatened with disappearance.

In addition, among the sixty-nine candidatures received for the Third Proclamation in November 2005, only a few candidatures were related to nature.

The Oral heritage and cultural manifestations of the Zapara people

The interactions between the Zapara people, nature and the universe are expressed through myths, songs, legends, rituals and knowledge in the Zapara language. Therefore it is crucial to maintain this language if we wish to preserve their cosmovision, spiritual life, cultural values and traditional knowledge. However today there are only five elders who can still speak this language. The Zapara people therefore consider that teaching the Zapara language to the young is the first priority for the safeguarding their traditional knowledge (Figure 1).

The Andean cosmovision of the Kallawaya

The cosmovision of the Kallawaya people is a coherent ensemble of myths, rituals, value systems and artistic expressions, expressed more particularly in their traditional medicine based on animal, mineral and botanical pharmacopœia. The Kallawaya healers and priests are itinerant and exclusively male. They practise not only in Bolivia but also in other Andean countries. Their traditional knowledge dates as far back as the pre-Inca period. Their

music, performed by pan flutes and drums during ritual ceremonies, establishes contact with the world of spirits. Their ritual textiles, woven exclusively by women, have patterns related to their cosmovision. Today, only thirty-five Kallawaya medical doctors are registered. It is interesting to note that one of the characteristics of their cosmovision is the metaphor of a mountain for a human body. Some 980 botanical species collected at different altitudinal levels in the Andes were identified as being used in the pharmacopœia. The safeguarding action plan prioritizes the setting-up of a legal protection mechanism for the protection of Kallawaya's botanical pharmacopoeia. The urgent need to implement the social and economic development projects to alleviate the poverty of the Kallawaya is also highlighted (Figure 2).

Vanuatu sand drawings

The sand drawing tradition from one of the Melanesian island countries of the South Pacific is practised in a wide range of contexts such as ritual, contemplation and communication. Its functions are multiple, including a means of communication between eighty different language groups, and mnemonic devices to transmit rituals, mythologies, histories, cosmogonies, kinship, farming techniques, songs, choreographies and knowledge on sacred meanings. The transmission of the knowledge and the skills is made orally and through gesture, often in secret. The master sand drawer possesses knowledge of sacred and profane meanings and their interconnectedness. He owns a knowledge of graphic patterns as well as their symbolism. He is therefore capable of not only understanding the drawings but also interpreting them to others.

Because of globalization and the development of tourism, the sand drawing tradition began to be distorted by losing its deep symbolic significance and original social function. The action plans emphasize the encouragement of the transmission of the knowledge and skills of the master sand drawers through public events and school education. Legal regulations also need to be established to protect the communities' rights of the drawers against commercial use of the patterns (Figure 3).

The oral and graphic expressions of the Wajapi

The Wajapi are an indigenous people living in the northern Amazonian region of Brazil. They comprise today 580 people living in forty small villages. Through oral expression and graphic body painting, which are indissociable and complementary, they express their cosmogony, beliefs, myth, shamanism, aesthetic and traditional knowledge. The graphic art is expressed on the body with vegetal dyes and geometric motifs. The patterns painted on the body draw attention to spiritual power but also protect the body from the dangers occurring in the forest. The mythology of the Wajapi relies on biodiversity as well as the diversity of the inanimate. According to the Wajapi world view, destruction or a restricted use of nature and the environment represents a real threat for today's humanity, which will be replaced by the souls of the dead.

Today no more than 7 per cent of the population possess the knowledge of the complete repertories of the patterns and are able to transmit them. The urban exodus of the young, illegal invasion of their territories and a decrease in natural resources are the main threats to the survival of this cultural heritage. The action plan aims at

enhancing the recognition of the values of this heritage by the Wajapi people themselves, and in particular the young. Training young Wajapis in researching into their own heritage, with a view to establishing an inventory of the graphic patterns, is given the highest priority. The Wajapi communities will thus be able to manage the preservation of their own heritage in an autonomous manner (Figure 4).

Conclusion

The experiences gained from the Proclamation of Masterpieces of the Oral and Intangible Heritage of Humanity reveal that forms of cultural expression closely related to nature have not been considered by UNESCO Member States as a priority domain of intangible cultural heritage. However, it is to be hoped that the second list under the new Convention, the List of Intangible Cultural Heritage in Need of Urgent Safeguarding, will encompass many of them. The intangible cultural heritage registered in this list is entitled to receive international assistance for safeguarding actions from the Intangible Cultural Heritage Fund which will be created now the Convention has entered into force (as of 20 April 2006), whereas items on the first list, the Representative List of the Intangible Cultural Heritage of Humanity, are not in principle eligible to receive international assistance. Therefore it is of paramount importance that specialists in intangible cultural heritage related to natural resources and ecosystems encourage the authorities of state parties of the 2003 Convention to submit this genre of heritage as their candidates for the second list.

As we have also observed in the Proclamation Programme and the subsequent 2003 Convention, 'physical' places owe their existence to cultural activities taking place there, while in the 1972 Convention physical places predominate over cultural expressions occurring there. Therefore the two Conventions are complementary. Close consultation and cooperation between the Intergovernmental Committees of both Conventions will be indispensable once the 2003 Convention enters into force.

More concretely, common nominations could be envisaged in future, particularly in the domain of sacred natural sites and cultural landscapes.

We also noted in the Proclamation Programme that all four proclaimed masterpieces closely related to nature are cultural expressions and practices of indigenous people, whose languages and cultural expressions are often threatened with extinction. The protection of sacred natural sites is undoubtedly beneficial for the safeguarding of the intangible cultural heritage practised mostly by indigenous people, who not only venerate the sites but also take adequate care of the natural resources and ecosystems that have existed there through centuries.

In order to ensure the urgent safeguarding of intangible heritage in sacred natural sites and cultural landscapes, and in particular traditional knowledge, preserved by its custodians mostly indigenous people, it will certainly be instrumental to create a mechanism of cooperation between the two Conventions, and more specifically under the international assistance provisions stipulated in both Conventions.

Fig. 1 One of the six remaining Zapara who speak the Zapara language [left page, left]

Fig. 2 A Kallawaya medical doctor, Bolivia [left page, right]

Fig. 3 A master sand drawer in Vanuatu [left]

Fig. 4 Body painting by the Wajapi, Brazil [right]

Many speakers have underscored the need for a paradigm shift in the concept of biodiversity conservation: from nature conservation without human interference, to nature conservation with the active participation of its custodians. It is precisely in the same vein that the 2003 Convention was conceived. This new Convention concerning Intangible Cultural Heritage emphasizes throughout its texts the active participation of practitioner communities in every step of the safeguarding process. The synergy of the two Conventions will certainly foster the progress of this paradigm shift.

Notes

1. Recommendation on the safeguarding of traditional culture and folklore adopted by the General Conference of UNESCO at its twenty-fifth session, 1989.
2. For the second proclamation, the definition drawn up by the expert meeting entitled 'The International Round Table on Intangible Cultural Heritage – Working Definitions' (Turin, March 2001), was used.
3. Regulations relating to the Proclamation by UNESCO of Masterpieces of the Oral and Intangible Heritage of Humanity. Article 1, Objective. Paragraph c.
4. Convention for the Safeguarding of the Intangible Cultural Heritage, Article 2 – Definitions 1. The 'Intangible cultural heritage' means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artifacts and cultural spaces associated therewith.
5. Proclamation of Masterpieces of the Oral and Intangible Heritage of Humanity: Guide for the Presentation of Candidature Files, p.13, para. 23 – a.
6. Regulations, Chapter 1. Objective, paragraph b.
7. Proclamation of Masterpieces of the Oral and Intangible Heritage of Humanity: Guide for the Presentation of Candidature Files ,p. 13, para. 23. b. ii.
8. Convention for the Safeguarding of the Intangible Cultural Heritage, Chapter IV, Safeguarding of the Intangible Cultural Heritage at the International Level, Articles 16 and 17.
9. Ibid., Article 31, Relationship to the Proclamation of Masterpieces of the Oral and Intangible Heritage of Humanity.

Session 8

Management examples of associative cultural landscapes: problems and perspectives

Genius of the Place: (re)presenting cultural landscapes, World Heritage listing, and intangible values. Making spaces into places in Asia

Ken Taylor, Humanities Research Centre, Australian National University and
Kirsty Altenburg, Australian Department of Environment and Heritage, Australia

Consult the Genius of the Place in all,
That tells the Waters or to rise or fall…

Alexander Pope (1791), An Epistle to Lord Burlington

Summary

World Heritage listing and public interpretation and presentation for tourism at sites in Asia like Angkor has tended to focus on architectural ensembles, notwithstanding archaeological research involving wider aspects of landscape setting. Taking Angkor, Borobudur and Bagan as examples, this paper proposes a critical review of the concept of such heritage places and their interpretation, under the wider concept of cultural landscapes replete with extensive intangible values and as outstanding examples of a continuous living, nourishing tradition and history. In this sense the architectural monuments themselves are a component of a wider cultural landscape pattern to which they are inextricably tied. Seeing the monuments without seeing their wider setting, their cultural context, is akin to seeing leaves but not the tree.

The paper is set within the framework of contemporary concepts of authenticity and Asian heritage places and the increasing interest in the cultural landscape concept in Asia. Underpinning the theme of the paper is the activity of reading the landscape, with its sense of continuity and interrelationships between people, events and place through time, and transmitting this to visitors. It is considered critical that visitors are able to understand how places like Angkor, from its earliest history, are part of a continuous landscape- making tradition where tangible and intangible values merge. Should places like Angkor be considered for additional nomination to the World Heritage List as cultural landscapes under the 1994 World Heritage categories of Cultural Landscapes of Outstanding Universal Value?

The rise of cultural landscapes

The 1990s saw a remarkable flowering of interest in, and understanding of, cultural landscapes: what David Jacques (1995) nicely calls 'the rise of cultural landscapes'. As a result of the rise – with associated emergence of a different value system inherent in cultural landscapes – there came a challenge to the 1960s and 1970s concept of heritage focusing on great monuments and archaeological locations, famous architectural ensembles, or historic sites with connections to the rich and famous. Widening interest in public history and understanding that 'the… landscape itself, to those who know how to read it aright is the greatest historical record we possess' (Hoskins, 1955) underpinned the emergence of the cultural landscape movement. It also informed the notion that places or landscapes reflecting everyday ways of life, the way people create places, and the sequence or rhythm of life over time were significant. They tell the story of people, events and places through time, offering a sense of continuity, a sense of the stream of time. They also offer a cultural context setting for cultural heritage.

Critical to the new movement were the 1960s and 1970s scholarly writings of cultural geographers like David Lowenthal, Peirce Lewis, Donald Meining, J. B. Jackson with his inimitable essays on the everyday American scene, Dennis Cosgrove in Britain, and Dennis Jeans in Australia. They built on the late nineteenth-century German tradition of Otto Schlütter's *Kulturlandschaft*, with landscape morphology seen as a cultural product, and Franz Boas, who championed the idea that different cultures adjusted to similar environments and taught the historicist mode of conceptualizing environment. They also followed the tenets of the American geographer Carl Sauer who, in the 1920s, continued this discourse with the view that 'the cultural landscape is fashioned out of a natural landscape by a culture group' (Sauer, 1925). An underlining message was – and still is – to use one's eyes and intellect out there, to

read the landscape as a document of human history with its fascinating sense of time and layers replete with human values which inform the genius of the place.

Equally important to the new sense of history and heritage values in the cultural landscape idea was the concept that we could have been involved in place-making. Visitors to cultural landscapes could be given a sense of participation through presentation of appropriate interpretative material. So in the 1990s the cultural landscape idea gathered momentum. It permeated cultural heritage management and plannin, thinking and practice.

World Heritage status

The term 'cultural landscape' is now widely accepted internationally. In 1993 cultural landscapes hit the World Heritage scene, with the declaration of three categories of cultural landscapes of outstanding universal value for World Heritage purposes:

* Clearly defined landscapes designed and intentionally created by man, such as the Aranjuez Cultural Landscape, Spain (2001). No Asian inscriptions exist notwithstanding places like Suzhou, China, being World Heritage-listed cultural properties.
* Organically evolved landscapes in two categories:
  - A relict or fossil landscape in which an evolutionary process has come to an end but where its distinguishing features are still visible, such as Gusuku Sites, Ryuku, Japan.
  - Continuing landscapes which retain an active social role in contemporary society, associated with a traditional way of life, and in which the evolutionary process is still in progress and where it exhibits significant material evidence of its evolution over time. Cultural landscapes inscribed on the World Heritage List in the Asia-Pacific region include for example:

    Champasak cultural landscape, including the Vat Phou temple complex, Lao People's Democratic Republic (2001) in recognition of its presentation as a remarkably well-preserved planned landscape more than 1,000 years old, shaped to express the Hindu relationship between nature and culture from the 5th to 15th centuries; Orkhon valley cultural landscape, Mongolia (2004), reflecting the symbiotic relationship between nomadic, pastoral societies and their administrative and religious centres, and the importance of the area in the history of central Asia; the Rice Terraces of the Philippine Cordilleras (1995).
* Associative cultural landscapes: the inclusion of such landscapes is justifiable by virtue of the powerful religious, artistic or cultural associations of the natural element rather than the material cultural evidence. Tongariro New Zealand (1993) and Uluṟu-Kata Tjuṯa National Park, Australia (1994) are two Asia-Pacific examples.

As further evidence of international attention, in 2003 UNESCO published two major reports: World Heritage Papers Nos. 6 (Fowler, 2003) and 7 (UNESCO, 2003). Peter Fowler in the first document (Paper 6) analyses existing and potential cultural landscape inscriptions to the World Heritage list – i.e. existing cultural properties that Fowler proposes could be extended for inclusion – and notes there were ***only*** (our italics) thirty official World Heritage cultural landscapes in 2003. He identifies (Table 8 in Fowler, 2003) 100 properties that meet one or more of the 1993 cultural landscape categories, but which have not been nominated or renominated as such since 1993. So there are seventy or so properties which the proposers had declined to nominate as cultural landscapes, including a significant number where the term 'landscape' figures in the nomination.

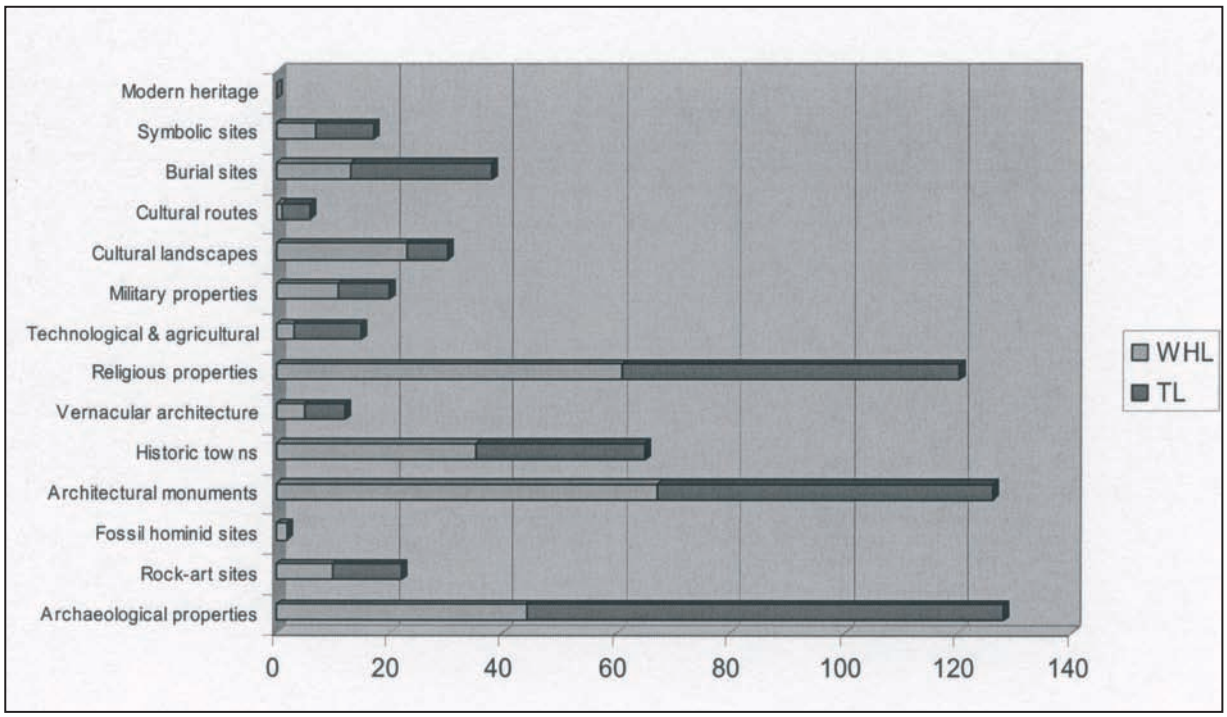
The reasons for the omissions are not readily clear. But the outcome is depressing given the effort that went into assembling the 1993 categories and the intellectual concept of cultural landscapes with their all-pervading *genius loci* or genius of the place. The cultural landscape concept is not a slippery one; rather it holds the key to understanding the cultural context and the setting of heritage places, and in the Asian context celebrating the remarkable existence of continuing living history. Here there is a direct link with the notion of the 'continuous nourishing tradition' of history to which Lowenthal (1996, p. 3) surmises, heritage may now be the heir, in his discussion, on the role of history, tradition, memory and heritage and human links with the past (see Figure 1).

Fowler speculates that the omissions are deliberate policy on behalf of the nominators, and in some cases caused by the cool reception by the International Council on Monuments and Sites (ICOMOS) assessors of some nominations (see p. 45 and Table 9 in Fowler, 2003). He continues therefore that as a result 'undeniable opportunities for inscribing cultural landscapes as such on the World Heritage List have been lost', adding that some examples were 'indeed outstanding cultural landscapes by any criteria' (Fowler, 2003, p. 45). If this is reflective of a global position then the outcome in the Asia-Pacific region is really a missed opportunity of palpable proportions. Of the thirty nominations only four at the time of 2003 report were in the UNESCO Asia-Pacific Region[1]. By comparison twenty-one were situated in the Europe-North America Region, including relatively new examples such as the Loire Valley, France (2000).

The 2004 report by ICOMOS *The World Heritage List: Filling the Gaps – An Action Plan for the Future* further highlights the gaps in the Asia-Pacific region in the inscription of cultural properties on the World Heritage List in general, and cultural landscapes in particular. Figure 1 (Annex 1a in Fowler, 2003) indicates that the majority of places on the World Heritage or Tentative Lists are

archaeological, architectural monuments and religious properties. While this logically reflects the importance of Buddhist temples and archaeological sites, the paucity of such ensembles as cultural landscapes, vernacular architecture, technological and agricultural sites represents a missed opportunity, taking into account the spirit of places in the region. Notable in this regard is the fact that many existing properties on the Lists would admirably fulfil the category of continuing landscape of outstanding universal value, with cross-references to the associative cultural landscape category. They offer scope for renomination. Additionally we suggest that future nominations where appropriate ought to be considered for cultural landscape nomination in addition to fulfilling World Heritage cultural criteria.

The foregoing discussion prompts the question, why is this so? Here it is instructive to look at the issue through the lens of authenticity and its relevance to notions of heritage in Asia. This is where the spirit of place resides as much in the meaning and symbolism of places and their setting – intangible values – as it does in tangible physical fabric. The continuum between intangible values and sense of living history/heritage and continuity of traditions within the rubric of concepts of authenticity in Asia has been well explored (Wei and Aas, 1989; Logan, 2002). It has been held that differences are apparent between Western and Eastern cultures, particularly with the Asian approach to renewal of physical fabric. This is where replacement of fabric is acceptable because the significance of the place resides primarily in its continued spiritual meaning and symbolic value related to everyday use rather than pre-eminence of the fabric itself; the latter is held to be a Western preoccupation. Notably, however, authenticity is a contested issue in China where it is considered to be a popular versus professional/elite concept rather than a difference between Asian and Western ideology. Notwithstanding such niceties, whether the issue of authenticity is adequately addressed in the interpretation and presentation of places for tourists is another matter, on which we touch later.



Authenticity, setting and site management: a Chinese perspective

Over the past decade the issue of authenticity in connection with interpretation of heritage values in the Asia-Pacific region has gained timely recognition. The 1994 ICOMOS document *The Nara Document on Authenticity*, and draft *Hoi An Protocols* document promulgated in 2000 by UNESCO Bangkok (see UNESCO, 2005) propose a review of conventional thinking on authenticity in the region (Taylor, 2004). Both take a fresh approach, with an acknowledgement of the existence of a plurality of approaches to authenticity, and the proposition that it does not reside primarily in maintaining the intactness of old

Fig. 1 World Heritage List and Tentative Lists for Asia-Pacific
Source: ICOMOS. 2004. *World Heritage List: Filling the Gaps – An Action Plan for the Future*. UNESCO-ICOMOS Documentation Centre. p. 58.

fabric, but that this may be replaced without damage to the values of a heritage place.

In the matter of authenticity, the China ICOMOS 2000 document *Principles for the Conservation of Heritage Sites in China* (Agnew and Demas, 2004) is critical in the context of Asian heritage practice. In the ***China Principles*** two words expressing inherent fundamental cultural heritage values are 'authenticity' and 'setting'.

It is notable that the Fifth General Assembly and Scientific Symposium of ICOMOS in October 2005 at Xi'an in China had as its theme the important notion of setting under the banner of 'Monuments and sites in their setting – conserving cultural heritage in changing townscapes and landscapes'. The background review for the conference proposes that:

> settings seem to be in need of a better set of tools to help out with their definition, documentation, protection and management. Setting is just not about physical protection; it may have a cultural or social dimension. Tools need to acknowledge both the tangible and the intangible aspects of setting. They also need to reflect the complexity of ownership, legal structures, economic and social pressures that impinge on the physical and cultural settings of immoveable heritage assets.

Embedded firmly within the *China Principles* is a sequential process for the conservation of heritage sites: identification, assessment, formal proclamation, and the preparation, implementation and periodic review of a conservation master plan for the heritage site (Article 9). Articles 13 to 16 provide further guidance on the preparation and review of master plans and specific action plans. The conservation process is iterative, and the guide to *Treatment of the Setting* – set out in Section 14 of the Commentary – follows the process. Here is a sound basis to inform good site planning, a process often not well understood in heritage management and noticeably so in the Asia-Pacific region. The dissemination of the *China Principles* will provide China with usable guidelines for improving planning and management of sites and their settings.

China is experiencing a dramatic increase in visitor numbers at heritage sites, with increasing numbers of international visitors in addition to the huge numbers of domestic tourists who are encouraged to take holidays and visit sites. In 1999 there were 72 million international visitors (of whom 8.4 million were foreigners and the remainder ethnic Chinese) and 694 million domestic travellers (Agnew et al., 2004). In recognition of the need for improved management practice, including managing visitors, two World Heritage Listed sites in China, Mogao Grottoes and Chengde Imperial Summer Resort and Outlying Temples, are developing master plans in accord with the *China Principles*. Subsidiary visitor management and interpretation action plans are being developed, which reiterate the Burra Charter and *China Principles* concepts and methodology, first identifying all the values of the entire site, followed by developing policies and strategies for visitor management and planning for all the site. The primary objective of visitor management and interpretation is to inform visitors about the values of the site while ensuring that the values are not adversely affected by either visitors or facilities erected to provide services. Strategies include using visitor surveys and focus groups to better understand visitor expectations, knowledge about and experience of the site, to assist management in developing improved interpretive material and services, a well-sited visitors' centre, circulation routes, exhibitions and displays, guides, signs and access.

Another strategy is to work with tourist agencies rather than regard them as the opposition. Initiating discussions with the tourist bureau and travel agents in Dunhuang, Gansu Province has provided site management at Mogao Grottoes with information on tourist arrivals, assisting with the installation of a reservation system, altering the uneven seasonal distribution, and forecasting future visitor numbers. A carrying capacity study for the site which is being developed aims to set scientific limits for visitor numbers to ensure no damage occurs to the values of the site. Establishing sound relations with the tourist authorities so that they understand the carrying capacity is for the long-term protection of the heritage site and thus provides ongoing benefit for the local, regional and national communities, is an important part of the process.

China had a tradition of heritage tourism and pilgrimage which continued throughout the dynastic emperors from 2000 BC to 1900 AD. It was only broken as China experienced a series of upheavals throughout the twentieth century. Mandarins previously had been exhorted to 'seek ultimate truth from the landscape', and their creative talents went into poetry, paintings, and calligraphy inspired by these landscape. Such philosophical interpretations of China's historical and sacred sites became – and remain today – part of Chinese 'common knowledge' (Sofield and Li, 1998). Visiting these places becomes a powerful unifying experience, which foreign visitors are unable to experience fully.

Chengde Imperial Summer Resort is a cultural landscape built by the Manchu Qing dynasty as a summer palace, with an Imperial garden with lakes, prairie and mountain zones within an encircling perimeter wall beyond which are eight – formerly twelve – temples. Every element was symbolically positioned to harmonize with the topography, with many gardens and scenic spots copied from famous landscaped gardens elsewhere in China, to represent all the beauty of the kingdom in one place. Chengde is the largest Imperial gardens in China and the artistic values of the

place are outstanding. Many of the architectural elements in the gardens, which were destroyed in the upheavals in the twentieth century, have been restored or reconstructed to reinstate the artistic values of the place. In the Chengde example authenticity of fabric was considered of lesser significance than restoring the authenticity of the design and the artistic values of the former Imperial gardens. The challenge however is to not reconstruct every element of the Palace complex and gardens and diminish the historic values of the site's latter history.

So the import of authenticity does seemingly connect with the Asian approach to renewal of physical fabric. Replacement is acceptable because the significance of the place resides primarily in its continued spiritual meaning and symbolic value, related to everyday use rather than pre-eminence of the fabric itself.

Three case study opportunities

Angkor

Most domestic and international tourists' impressions of Angkor are highly likely to pivot on selected architectural and archaeological forms, the immediate physical space around them and the tourist drive. It represents presentation of heritage as separate dots on a map isolated from their cultural and intellectual setting: their cultural landscape. The following is the brief description on the UNESCO World Heritage List website:

Angkor is one of the most important archaeological sites in South-East Asia. Stretching over some 400 sq. km, including forested area, Angkor Archaeological Park contains the magnificent remains of the different capitals of the Khmer Empire, from the 9th to the 15th century. These include the famous Temple of Angkor Wat and, at Angkor Thom, the Bayon Temple with its countless sculptural decorations. UNESCO has set up a wide-ranging programme to safeguard this symbolic site and its surroundings.

Tim Winter (2004) reflects that:

one of the defining features of World Heritage Listing was Angkor's spatial, legal and political isolation from its immediate surroundings…. This often results in the visitor only travelling to Cambodia to see the World Heritage Site of Angkor, rather than visiting the country itself [and visitors] typically make little connection between Angkor and Cambodia.

This is not to deny the importance of structural preservation within an architectural and archaeological imperative. But it does conceive of Angkor as material heritage of the ancient past, something to be marvelled at, but divorced from the vibrant idea of living history and heritage. It is a commodification of heritage which privileges things rather than people where perhaps 'restoration is the commerce of illusion'.[2] The illusion is that behind and surrounding the monuments is a living landscape where people continue a way of life that has links with the people who created Angkor a thousand years ago, and prior to that to pre-Angkorian period settlement (Figure 1). Within this view of Angkor is the enduring survival of intangible values and authenticity of traditions and techniques; location and setting; spirit and feeling as set out in *The Nara Document*. Richard Engelhardt's (1995*a*) description of Angkor aptly catches the breathtaking extent of what Angkor really is about:

Commanding a strategic location on the uppermost tip of Cambodia's great Tonle Sap lake, the ruins of the Angkor Empire expand north, east and west from the shores of the lake up to the sacred Kulen mountain plateau. This entire 5,000 square kilometre site, once the location of one of the world's largest metropolitan areas, is a relic cultural landscape – an environment which was intensively engineered by human activity over time to suit the Empire's changing temporal needs.

Engelhardt (1995*b*) shows how the landscape is a window into the past which continues into the present: a series of layers through time bearing testimony, if we but spend time to read it, to how the landscape has been shaped, why it has been shaped the way it is and who was involved. He further indicates that the Angkor area had a well-structured settlement pattern and appreciable density of population in the prehistoric period. Evidence from aerial photography and satellite imagery shows pre-Angkorian settlement mounds scattered on the plain as forerunners of the heavily populated Khmer Empire. Remote sensing shows the patterns of old field systems which were established across the Khmer plain at an early date. Christophe Pottier of

l'Ecole Française d'Extrème Orient – who worked with Engelhardt – has continued archaeological investigations of the early settlement patterns to uncover a fascinating pattern of development as another layer in the Angkor landscape (2005). Subsistence farming, religious practices, vernacular architecture, craft traditions and trade skills provide visible evidence of continuous living in the landscape on the Khmer plain. Sugar palms, introduced from India in the Angkorian period, are harvested by householders to condense into palm sugar, and, wrapped in palm leaves, sold to tourists visiting the Angkor sites. How do the local residents who live and work within the Angkor landscape see and value the landscapes in which they live? What would they like visitors to understand and learn about their place? Cambodian domestic tourists are visiting Angkor in ever-increasing numbers. What are their views on how this deeply symbolic icon of Cambodian national and cultural identity should be presented to them and to the rest of the global community? These are critical questions that interpretation and presentation of Angkor needs to address.

In the context of Alexander Pope's quotation under the title of this paper, there is enormous potential at Angkor to 'Consult the Genius of the Place in all, That tells the Waters or to rise or fall' and present this as part of the visitor experience. In contrast, visitors are presented with what Bender terms an 'attempt to *freeze* the landscape as a palimpsest of past activity… freezing time allows the landscape or monuments in it to be packaged, presented and turned into museum exhibits' (Bender, 1999 in Winter, 2004, p. 26). Here is a stimulating opportunity for new approaches to site interpretation and presentation of the story of the whole 5,000 sq km.

The vast extent and network of the Angkor setting admirably meet the World Heritage Cultural Landscape categories of an Organically Evolved Continuing Landscape and Associative Cultural Landscape of Outstanding Universal Value. Should it not be reinscribed on the World Heritage List as such to celebrate it as one of Asia's jewels of living heritage where everything in the everyday landscape is interconnected?

Borobudur

As with Angkor, tourists' impressions of Borobudur are focused on the temple structure. The brief description on the UNESCO World Heritage List we cite for Borobudur is similar:

This famous Buddhist temple, dating from the 8th and 9th centuries, is located in central Java. It was built in three tiers: a pyramidal base with five concentric square terraces, the trunk of a cone with three circular platforms and, at the top, a monumental stupa. The walls and balustrades are decorated with fine low reliefs, covering a total surface area of 2,500 sq. m. Around the circular platforms are 72 openwork stupas, each containing a statue of the Buddha. The monument was restored with UNESCO's help in the 1970s.

Borobudur, some 40 km from Yogyakarta in central Java, stands in the centre of the fertile and richly watered Kedu Plains, flanked to the south by the jagged Menoreh Hills and to the east and north from Mount Merapi by a series of volcanic peaks linked by an undulating ridge. The whole setting is a gigantic amphitheatre with Borobudur standing in the middle on a low hill, creating a memorable and evocative effect. The whole landscape ensemble is a vast outdoor museum of theatrical proportions. The shape of Candi Borobudur itself mirrors the volcanic peaks. The sight of the

monument rising out of the landscape is awe-inspiring. Its presence in this landscape suggests an association between the monument and its setting that is palpable and rich in Buddhist meaning with Hindu overtones (Figure 2).

Two smaller temples, Candi Pawon and Candi Mendut, similar in style and craftsmanship, are in a perfect east–west alignment towards Mount Merapi. But there are older markers in the landscape. These are the remains of around forty Hindu temples and archaeological sites which follow the lines of creeks and rivers. The Buddhist temples are surrounded by a rural landscape of rice paddies and palm groves, with small towns and villages creating a sense of the stream of time and place.

The cultural context and authenticity of the whole setting of Borobudur offers a compelling visualization of the cosmology of the Buddhist mandala, thought by many scholars such as Miksic (1990) to be the crux of the building

Fig. 1 Cultural landscape at Angkor: example of the continuous nourishing tradition of living history and the interaction between people and environment which have created the cultural landscape and setting for the monuments of Angkor [left]
Fig. 2 Borobudur; palpable association between monument and its cultural landscape setting [right]

of Borobudur in its cultural (historical) landscape. Here is represented a single, circular world system surrounded by a mountain of iron, and at the centre is Mount Meru (represented by Mount Merapi at Borobudur). It is a single world system where relationships exist between various parts of the universe and where myth and reason coalesce to offer an exquisite visualization of the order of things. Just to look out over the landscape from the terraces of Borobudur is a stunning and moving experience: the landscape speaks dramatically and persuasively of a mystical but real relationship between people, time, events, beliefs and place. Here are layers in the landscape waiting to be read and interpreted to tell us something about who we are in time.

The 2003 UNESCO Fourth Experts' Meeting of the World Heritage Committee included in its brief the instruction to review the boundary of the site listing.[3] The current boundary includes Candi Borobudur and its immediate surrounds. The Experts' Meeting proposed that the boundary of the World Heritage Listing be extended to recognize the outstanding cultural landscape values of Borobudur within the continuing and associative value categories. It also addressed problems of visitor management, site planning and interpretation, but that is another story.

The sense of continuity, fit with the setting, and Borobudur's undeniable presence as the 'Cosmic Mountain of the Perfect Buddhas' from *The Ratu Boko Inscription* of 792 AD (in Soekmono et al., 1990) make it one of the most remarkable edifices of not only Central Java but the entire Buddhist world. Its haunting presence, reflecting an ancient belief in the indivisible junction between man and nature, where Mount Merapi to the east and Borobudur itself are the focal points of a sacred landscape, suggest it is timely that it be considered as a cultural landscape of outstanding universal value.

Bagan

Bagan, City of Pagodas, lies on the memorable floodplain landscape of the Irrawaddy River in central Myanmar. It is a remarkably vivid and memorable representation of the continuous nourishing tradition of association between people and landscape: a place where living, everyday history and symbolic meanings with associated intangible values abound. At Bagan amongst the remaining 2,200 pagodas, local life continues as it has for centuries: fields are tended, crops grown, rice harvested. These are the remnants of around 13,000 structures built between 1057 and 1297 AD, and the sense of the ordinarily sacred is all-pervading.

Like most Asian sites the impact of tourism at Bagan, international and domestic, is abundantly evident. The Myanmar authorities decided in 2003 to build a viewing tower which is located at the northern edge of the archaeological park setting (Figure 3). It has caused consternation internationally from some quarters. On balance it seems to be an acceptable part of the site planning for the area given that unfettered visitor access to the pagodas cannot be sustained without damage to the structures and accidents involving people.[4] For example the numbers crowding onto a number of terraces on pagodas to view the sunset has increased alarmingly. Bagan is not on the World Heritage List, but its palpable

presence sitting majestically, yet elegantly unobtrusive, in the landscape speaks of a synergy between people (culture) and nature. It is yet another example of an Asian cultural landscape of outstanding universal value.

Conclusion

Our aim in this paper is to encourage a fresh and critically holistic look at how heritage places in the Asia-Pacific region might be seen, thereby offering fresh avenues for interpretation and understanding, not least for tourist purposes. We have set the discussion within a World Heritage narrative and what we see as the desirability and need to explore the infinite opportunities presented by the cultural landscape construct.

Acknowledgement

This chapter is based on a paper first presented at the Conference: Contemporary Research on Pre-Angkor Cambodia, held at the Centre for Khmer Studies, Siem Reap, on 10 to 12 January 2005.

Notes

1. This figure has increased in 2004 with the welcome inscription of Bam and Its Cultural Landscape (Iran), Orkhon Valley Cultural Landscape (Mongolia), and Cultural Landscape and Archaeological Remains of the Bamiyan Valley (Afghanistan).

2. Anon. Comment made by a performer in a Dublin Fringe Festival presentation, September 2003.

3. One of the authors, K. Taylor, attended this meeting to speak on historical landscape planning.

4. It is reported that in 2003 two foreign tourists died in falls from a pagoda.

References

Agnew, N. and Demas, M. (Eds.). 2004. *Principles for the Conservation of Heritage Sites in China*. English translation of original by ICOMOS China. Los Angeles, Getty Conservation Institute. www.getty.edu/conservation/publications/pdf_publications/china_prin_2english.pdf (accessed 20 April 2006).

Agnew, N. Demas, M., Sullivan, S. and Altenburg, K. (2004). *A good master a bad servant*, Paper to Australia ICOMOS Conference, Port Arthur, Australia, November 2004.

Bender, B. 1999. *Stonehenge: Making Space*. Oxford, Berg.

Cosgrove, D. 1984. *Social Formation and Symbolic Landscape*. London and Sydney, Croom Helm.

Engelhardt, R. A. 1995*a*. Two thousand years of engineering genius on the Angkor plain. *Expedition*, Vol. 37, No. 3, pp. 18–26.

Engelhardt, R. A. 1995*b*. Early habitation on the Angkor plain: evidence from recent archaeological research. *Expedition*, Vol. 37, No. 3, pp. 27–29.

Fowler, P. J. 2003. *World Heritage Cultural Landscapes 1992–2002*. UNESCO World Heritage Paper 6. Paris, UNESCO. http://whc.unesco.org/pg.cfm?cid=162&l=en&&&index=1 (accessed 20 April 2006).

Hoskins, W. G. 1955. *The Making of the English Landscape*. London, Hodder and Stoughton.

ICOMOS. 1994. *The Nara Document on Authenticity*. UNESCO-ICOMOS Documentation Centre. www.international.icomos.org/publications/nara.htm (accessed 20 April 2006).

ICOMOS. 2004. *World Heritage List: Filling the Gaps – An Action Plan for the Future*. UNESCO-ICOMOS Documentation Centre. www.international.icomos.org/publications/m&s12.htm (accessed 20 April 2006).

Jackson, J. B. 1984. *Discovering the Vernacular Landscape*. Yale, Conn., Yale University Press.

Jacques, D. 1995. The rise of cultural landscapes. *International Journal of Heritage Studies*, Vol. 1, No. 2, pp. 91–101.

Jeans, D. N. (ed). 1984. *Australian Historical Landscapes*. Sydney, Allen & Unwin.

Lewis, P. 1979. Axioms for reading the landscape. D. W. Meinig (ed.), T*he Interpretation of Ordinary Landscapes: Geographical Essays*. New York, Oxford University Press, pp. 11–32.

Logan, W. 2002. *The Disappearing 'Asian' City: Protecting Asia's Urban Heritage in a Globalizing World*. Hong Kong, Oxford University Press China.

Lowenthal, D. 1975. Past time, present place, landscape and memory. Geographical Review, Vol. 65, no. 1, pp. 1–36.

Lowenthal, D. 1996. *The Heritage Crusade and the Spoils of History*. London, Viking.

Meinig, D.W. (ed). 1979. *The Interpretation of Ordinary Landscapes: Geographical Essays*. New York, Oxford University Press.

Miksic, J. 1990. *Borobudur: Golden Tales of the Buddhas*. London, Bamboo Publishing.

Pottier, C. 2005. *Pre-Angkor in Angkor*. Paper given at conference on Contemporary Research on Pre-Angkor Cambodia, Centre for Khmer Studies, Siem Reap, 10–12 January 2005.

Sauer, C. 1925. The morphology of landscape', 1925. C. Sauer (ed.), *University of California Publications in Geography (1919–1928)*, Vol. 2, No. 2 (1929), pp. 19–53.

Soekmono, R., de Casparis J. G. and Dumarcay, J. 1990. *Borobudur: Prayer in Stone*. Paris, Editions Didier Millet and Singapore, Archipelago Press.

Sofield, T. H. B. and Li, F. M. S. 1998. Tourism development and cultural policies in China. *Annals of Tourism Research*, Vol. 25, No. 2.

Taylor, K. 1998. From physical determinant to cultural construct: shifting discourses in reading landscape as history and ideology. *FIRM(ness) commodity DE-light: SAHANZ questioning the canon*. Proceedings of the Fifteenth Annual Conference of the Society of Architectural Historians Australia and New Zealand, University of Melbourne, September.

Taylor, K. 2004. Cultural heritage management: a possible role for charters and principles in Asia. *International Journal of Heritage Studies*, Vol. 10,No 5, pp. 417–33.

UNESCO. 2003. *Cultural Landscapes: The Challenges of Conservation*. UNESCO World Heritage Paper 7. http://whc.unesco.org/pg.cfm?cid=162&l=en&&&index=1 (accessed 20 April 2006).

UNESCO. 2005. *Hoi An Protocols for Best Conservation Practice in Asia. Professional Guidelines for Assuring and Preserving the Authenticity of Heritage Sites in the Context of the Cultures of Asia within the Framework of the Nara Document on Authenticity* (Third draft – version April 2005). Bangkok, UNESCO. www.unescobkk.org/index.php?id=3515 (accessed 20 April 2006).

Wei, C. and Aas, A. 1989. Heritage conservation east and west. *ICOMOS Information*, Vol. 3.

Winter, T. 2004. Cultural heritage and tourism at Angkor, Cambodia: developing a theoretical dialogue. *Historic Environment*, Vol. 17, No. 3, pp. 3–8. Paper first presented at 'New Trends in Khmer Studies', Centre for Khmer Studies, Siem Reap, 8–9 January 2004.

Fig. 3 Bagan: archaeological park zone showing setting of the pagodas and association with the cultural landscape reflecting over one thousand years of continuous living history

Culture, landscapes and the principle of guardianship

Chief Tumu Te Heuheu, Community Relations Turangi Taupo Area, New Zealand

Kia mau ki tou whakapono
Kia mau ki tou iwi
Kia mau ki ou hiahia
Kei roto i te mahingatahi
Ka puawai ou tumanako.
Adhere to your faith
Adhere to your people
Adhere to your desires
For in partnerships with them
Your aspirations will appear.

I would like to begin by paying my respects to the people of this great and beautiful country. I am amazed by the grandeur of the natural landscape, and the unmistakable evidence of centuries of human encounters. I congratulate you and I am inspired by your success in meeting a myriad of historical challenges, and never losing sight of the traditions and customs you have inherited from earlier generations.

I want to also acknowledge all participants at this symposium and especially my friends from the Pacific. I should add that the waters that ebb and flow on the shores of this land are the same waters that wash up on the beaches of those islands of the South Pacific. Despite the vast distances and the different pathways that our peoples have taken, the Pacific Ocean provides a conduit between the north and the south, between Polynesia and Asia, and between the cultures that cohabit the extensive 'Rim of the Pacific'.

For my part, it is a great honour to be able to participate in this symposium, focusing on the future management of our sacred natural sites and cultural landscapes. I believe the two dimensions – nature and culture – fit comfortably together. The essential point I want to emphasize today is the inseparability of people, the land and our natural environment. This relationship forces us to foster the dialogue about our natural surroundings, and to adopt a holistic and participatory view of our universe.

That, at least, is the experience of my people, the Maori of New Zealand. I come from a tribe known as Ngäti Tuwharetoa. Our tribal territory is somewhat different from other tribes insofar as we do not have a coastline or border the Pacific. Instead we live inland, on a plateau in the centre of the North Island.

Like all Maori, we maintain strong genealogical links to our ancestral lands and surroundings. In this way we are inseparable from the land and nature.

Our genealogy links us also to our coastal *whanaunga* (our extended family), and to our Pacific forebears who had the knowledge, and fortitude, to venture from their Pacific homelands to *Aotearoa* (New Zealand). How our forebears confidently traversed the waters of the Pacific for thousands of years without conventional technology or compass is a remarkable story in its own right. It illustrates the harmonious integration of humans with nature, and a vast and in-depth knowledge and wisdom, shaped by centuries of human experience and interaction with their world.

What really distinguishes us as *Ngati Tuwharetoa* in the eyes of our neighbours is the enduring tribal heritage we have established with our land and its significant natural features. Our tribal motto ties together the marvels of nature and the endurance of our cultural legacy.

Ko Tongariro te maunga
Ko Taupo te moana
Ko Ngäti Tuwharetoa te iwi
Ko Te Heuheu te tangata.
Tongariro is our ancestral mountain
Taupo is our inland sea
Tuwharetoa is our tribe
Te Heuheu is the man.

I will share with you an insight into our oral tradition, which accompanies this verse, as a means of illustrating our tribal links to these natural cultural landscapes:

Ko Tongariro te maunga
(Tongariro is our ancestral mountain)
My mountain,
beshouldered by Tarapikau in the time of Papa-tioioi-she-who-laboured-and-gave-birth (or commonly referred to as our earth mother)
domain of the elfin king Ririo-the-unseen protector of the boundaries
the conjurer of the blizzard wind which tested our High Priest and esteemed ancestor Ngatoroirangi and found him equal to your zenith
the lava-spewing mouth of Ruaimoko, the-earthquake-god
the wind-carved treasure chest who holds forever our memories in the bones of our ancestors who are buried in your folds
the summit of our aspirations as the highest point of land closest to the sky
the anchorage of our enlightenment as your face is bathed in the sun
the pinnacle of refinement from broad base to top-knotted head
the capturer of our breath as the wind-god cleanses our soul
my mountain, my elder, my permanence as I am not, I bow to you.

Ko Taupÿ-nui-a-Tia te moana (Taupÿ is the sea)
My Inland Sea,
my medicinal waters offered as a gift by My Mountain Tongariro
the foam and spray maker of the wake of Te Reporepo, the emblem canoe of our tribe
Our spiritual womb, the cherishing waters of our embryo life – giving, cherishing, fundamental
the seat of my emotions that ripple and wave in the ceaseless lapping tides of survival
the mirror of my soul upon which I reflect
my waterpool that carves the face of the earth; renews me, restores me, rebirths me
my lake that represents the pool of life, and I but one drop, enjoined forever.

Ko Tuwharetoa te iwi (Tuwharetoa is our tribe)
My Tribe,
the collective of my individuality
the cloak about my shoulders bordered with the intricate patterns of my lineage
originated in He (who-is-esteemed-above-all) – Manaia
who became He (of-the-noble-house-of-fighting-lords) – Tuwharetoa
to whom I am bound
to whom I account
to whom I call
to whom I reply
the relations of my relationships
my kin.

Ko Te Heuheu te tangata (Te Heuheu is the man)
I am the eighth in the line of descent from Te Heuheu Hereara Tukino I, a line that has maintained a legacy of our tribal heritage.

I do not think that our tribe, or other Maori tribes for that matter, are unique in the way they view the world. Indigenous peoples within the wider Pacific hold similar beliefs. Indeed, there are peoples and cultures all over the world that see themselves as part of the natural world rather than apart from it.

Underlying the intimacy between people and the land is the principle of mutuality. This principle places a clear obligation on the people to exercise guardianship and wise stewardship, so that the landscape is protected, and so that the identity and spiritual strength of the guardians is maintained and enhanced.

I referred earlier to our ancestral mountain, Tongariro. It is one of three volcanoes, all in close proximity to each other and all within the tribe's territory. Two of those, Ruapehu and Ngauruhoe, are currently active. We suspect that the third, Tongariro, might yet again vent its anger if its relationship with our people is ever weakened or negated or if we neglect our duty of guardianship.

In 1887 my great-great-grandfather, Horonuku Te Heuheu Tukino IV, gifted the peaks of all three mountains to the safekeeping of our government so that they could forever be maintained as a protected, natural heritage landscape. He did this in the dual expectation that Ngati Tuwharetoa would maintain its guardianship and heritage links and all people would share in the unique values that our ancestor could offer. Horonuku described Mount Tongariro as follows:

Tongariro is my ancestor, my 'tupuna'; it is my head;
my 'mana' centres around Tongariro.
You know my name and history are associated
with Tongariro.

Horonuku's actions were spurred by his concern that privatization of land ownership would destroy this vital element of human culture and would lead to the displacement of our people from their ancestral land and the roots of our identity. The New Zealand Government declared these lands to be a national park shortly after they had been gifted.

My late father, Sir Hepi Te Heuheu, when agreeing to the declaration of the Tongariro National Park as a World Heritage Site in 1990, stated:

The mountains are to be owned by no one and yet are for everyone. This land of Tongariro National Park is our mutual heritage. It is a gift given many times over.

Our reverence for the mountains goes deeper in that in time, with the essence of our genealogies, all life forms originated from the same parents, Papa-Tu-a-Nuku, the Earth Mother and Rangi, the Sky Father, so that man and all other life forms are in harmony with one another in the bonds of kinship.

Tongariro National Park was first declared a World Heritage area in 1990, and in 1993 was also recognized as 'an outstanding cultural landscape', thus achieving a dual status. Sometimes a heritage site may appear to be justified entirely on the basis of its unique physical characteristics and its vulnerability to damage or defacement. But we must look beyond the obvious physical characteristics and see the myriad layers of human meaning and experience associated with these sites. Only then can we begin to understand the intangible cultural, social and spiritual fabric which provides the foundation for the future management and maintenance of key human relationships with these sites and landscapes.

When nature and culture come together, there is an opportunity to celebrate the relationship between people and the land, and to applaud the notion of mutuality. In the process we begin to achieve a legitimacy that is both inclusive and universal.

Ladies and gentlemen, I have not intended to use the example of the Tongariro and our National Park to claim uniqueness. I am fully aware that there are mountains and tribes in many parts of the globe where a similar sense of affinity prevails – where it is not possible to separate intangible values from the land. But what I have intended to do is to use the example of our tribe and our mountains to underline a fundamental principle in the conservation of cultural and biological diversity: the principle of guardianship or stewardship, in the Maori language the principle of *kaitiakitanga*.

When it comes to management of our cultural landscape all of the above makes it sound easy. But that is not necessarily so. We have found ourselves in accord with the government, who are the managers most of the time. We have found ourselves in accord with users of the park most of the time. But on occasions we have had to act vigorously in our role of *kaitiakitanga* – as guardians.

Thus, when it comes to managing a future lahar on the mountain, *Tuwharetoa* and the government have been of a similar view. There will be no physical interference with the sacred peaks of the mountain which are in the gift area.

When the ski field operator wished to extend the ski area further up the mountain, *Tuwharetoa* and the government were in accord and did not agree with the company.

However, when the government published a draft management strategy embracing the mountain, *Tuwharetoa* did not agree with some of the proposals. *Tuwharetoa* used the processes of the courts to ensure we fully exercised our responsibility of *kaitiakitanga*. After much discussion and goodwill we both eventually agreed on a management strategy.

In exercising the full parameters of *kaitiakitanga* or guardianship we are also acutely conscious of the need to balance worldwide interest in the landscape with tribal interests and the maintenance of cultural veracity. The challenge is not so much to recognize the relationship between the national park and the tribe, for that is now affirmed by the World Heritage provisions. The challenge is to embrace and manage global enthusiasm with tribal integrity, so that both can be understood, appreciated, and shared by those who will follow us in the years ahead.

UNESCO has the potential to adopt a guardianship role for the globe. and to do so in a way that promotes the best interests of nature and of cultures. At least in respect of World Heritage Sites, a three-way approach to guardianship will continue to evolve. In this triadic approach there will be complementary roles for the World Heritage Centre, for states and governments, and for cultural groups such as tribes. I would hope that as we gain confidence in working together we will be able to develop a framework within which those complementary roles might be strengthened, and any dichotomy between nature and culture might be converted into a synergy.

Finally, Chair, it is protocol for me that my presentation about our sacred, ancestral mountain – Tongariro – should not close without acknowledgement of Mount Fuji. To this end I salute the sacred Fuji-san and the family of other esteemed mountains of Japan.

Ladies and gentlemen, I thank you all for the opportunity to address this symposium.

The cultural and natural landscape of Uluṟu-Kata Tjuṯa National Park

Graeme Calma, Board of Management, Uluṟu-Kata Tjuṯa National Park, Northern Territory, Australia

Nguraritja Tjuta (Traditional Owners), Uluṟu-Kata Tjuṯa National Park

Nganana malikitja tjulaku mukuringanyi
nganampa ngura
nintiringkunytjaku munu Anangu kulintjaku.
'We want all our visitors to learn about our place and to listen to us Anangu.

© Kunmanu, Traditional Owners

This is Aboriginal land and you are welcome.
Look around and learn in order to understand
Aboriginal people and also understand that Aboriginal culture is strong and alive.

© Nellie Patterson, Traditional Owners

Handback

The Handback (26 October 1985) was a very important day for Anangu in the Central Western Desert area. It not only meant that the land was being returned to them, but also that Joint Management and all these other programs and activities would also follow. The input from senior Traditional Owners would also play an important part in sharing indigenous knowledge of the park and surrounding areas.

For tens of thousands of years Uluṟu and Kata Tjuṯa have been on Aboriginal land. Piranpa (non-Aboriginal) people put us in a Reserve set aside for Anangu.

In the 1940s the Park was excised from the reserve to be made a National Park. During the years when we were not in control. our sacred places were not looked after properly. We were not able to look after the land the way our ancestors had taught us.

After many years of hard work and negotiations. the title deeds to Uluru and Kata Tjula were handed back to us

Fig. 1 Handback ceremony, 26 October 1985 [above left]

Fig. 2 The cultural and natural landscape of Uluṟu-Kata Tjuṯa National Park [above right]

Fig. 3 Logo of Uluṟu-Kata Tjuṯa National Park [left]

by the Governor General of Australia in 1985.

We in turn, leased the land back to the Federal Government for 99 years. Since that time we have been managing Uluru-Kata Tjula National Park together with the Director of National Parks. This process of working together has come to be known as 'joint management'.

An important part of managing the Park is keeping our traditional law to guide us. We try to do this while accommodating the interests of non-Anangu people on our lands. It is not always easy.

We understand that visitors and people in business want to use the Park. We also have a responsibility to protect the environment of the Park and our people.

We want visitors to learn about our land and our culture and have a safe and happy visit.

The Lease

This came about because of the actual Handback of the land and the Title to the Traditional Owners. They then lease the land back to Parks Australia North for 99 years and from that Lease there was a Plan of Management. Complexities of the Plan of Management took five attempts to get to the Final Plan. One of the requirements in the Lease was to review it every five years to see if Anangu were happy with it, but also to make sure that the Traditional Owners and all stakeholders were happy.

Board Of Management

This was put into place because of the Joint Management arrangement. The guiding principles for the Board is *Tjukurpa* which is the Anangu Law & Culture and then you have the Commonwealth Legislation.

Sub-Committees of the Board:

- Tourism Consultative Committee
- Film & Photography
- Cultural & Heritage
- Employment & Training

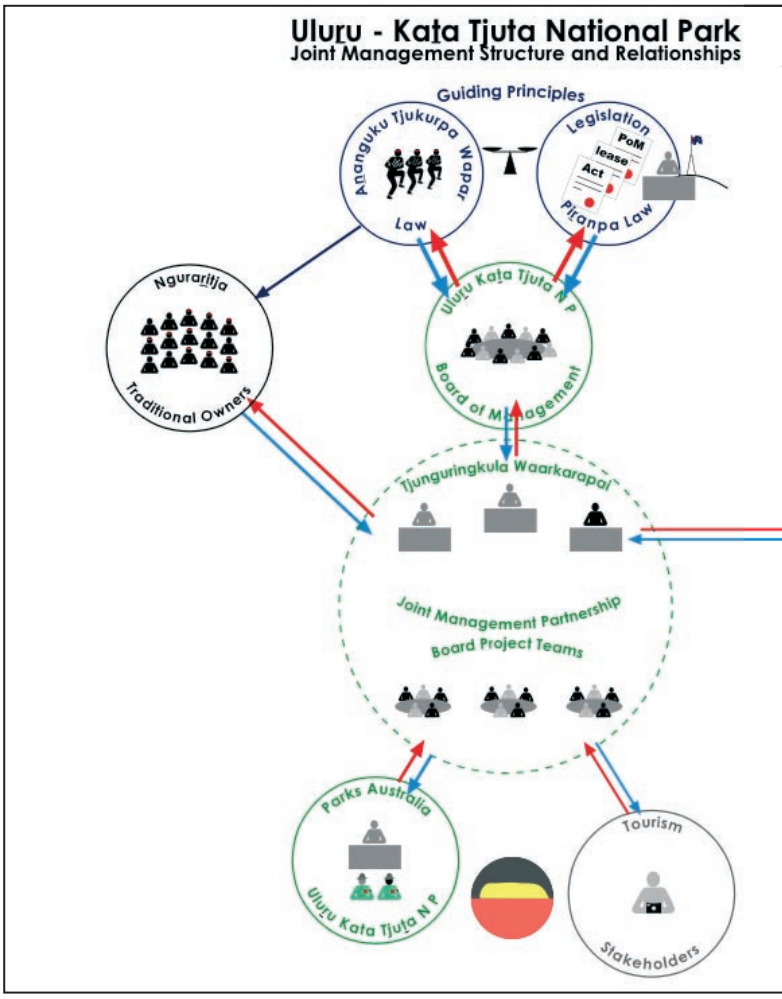
Joint Management

This is a unique agreement between Traditional Owners and Parks Australia North to ensure the aspirations of the Traditional Owners and their traditional knowledge of the land and the Park, but it also means that the western culture of managing a Park on a day to day basis is guided by *Tjukurpa*. *Tjukurpa* is one of the guiding principles, not only for the Board of Management but for the Parks' existence where with the DEH (Dept. of Environment & Heritage), and their concepts and contribution, ensures that the Plan of Management is working together to co-exist.

The National Park

The National Park is a living, breathing conservation site. Anangu people are a nomadic tribe and by travelling and living in the area they shape and change the cultural landscape. They play a big part in helping the natural landscape by burning as some of the plant species do need fire to reproduce the seeds. Many natural plants and grasses lie dormant for a time. Fire helps to get rid of several of the introduced grasses that were introduced because of soil erosion and after the fires they help with the regermination of the seed stock from the ground.

With bio-prospecting Anangu and researchers work together to identify certain plants and trees that have medicinal purposes. Some medicines come from a combination of 2 or 3 trees, some from only one tree. It is very important that Anangu, who have a good understanding about the cultural landscape and the biospheres, can help the researchers but also help their own people with a lot of the plants to cure some illnesses. This is very important to Anangu but also very important to the wider community because it is a lot better to have natural products which come from the earth and do not have any artificial chemicals in them.



One certain product, which comes from a number of plants, is used widely in the communities for rubbing away aches and pains in the body, but this can also be drunk to help with colds and other internal problems. This is only the tip of the iceberg of what Anangu know is out there and what is available. It is a lot of hard work because a lot of gathering has to be done but they do it in a sustainable way and they are always thinking about the future. Some big mineral companies now want to take a look at these traditional medicines and ways of gathering.

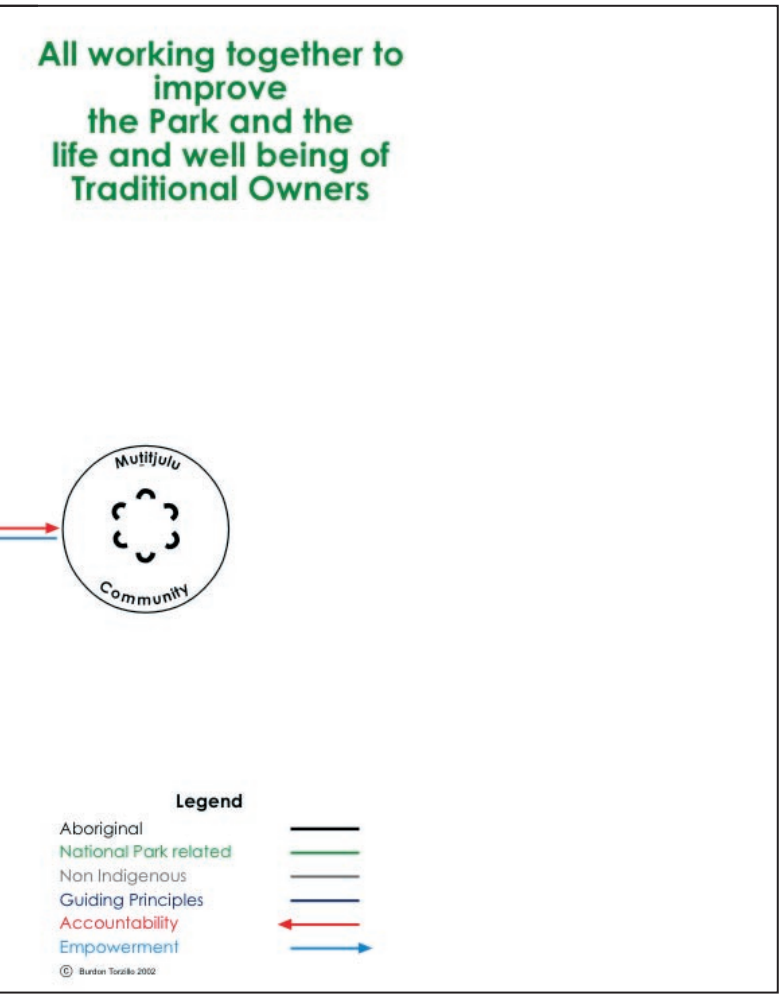
Responsibilities

Anangu are custodians of many sacred sites and have had a long attachment and spiritual affiliation with the land (no photographs available to respect Indigenous culture).

Anangu have various *Tjukurpa*, which has a broad meaning and can mean the past, future and present depending on how it is worded and talked about. *Tjukurpa* about animals, *Tjukurpa* in trees, *Tjukurpa* in the actual landscape itself - it has a broad meaning and representation. Anangu, whilst travelling through the landscape, which they have been doing for thousands of years, know exactly where to burn and when to burn, but also are very mindful of sustainability and making sure there are plenty of plant stocks and animal stocks. Most of the time when Anangu travel, they only take what they need because they do not have refrigeration and things to keep the food that they gather in good condition. The food has to be cooked and prepared a certain way according to custom. If not prepared the right way it could insult some of the Elders but it is all part of the learning when you travel through this great landscape known as Central Australia.

This area is one big natural cultural landscape and the thinking Anangu do depends on each other. It is very important that they pass on their skills and traditions to their people. Today with western influences such as TV, radio, discos, those customs and traditions sometimes tend to be forgotten but there is a big shift to start to revitalise these practices so that its not only for conservationists, individual groups or Anangu but important for everybody as the environment is there for everybody to see, look after/maintain and make sure the traditional stories are not lost.

Now in Central Australia we have aboriginal radio which is a good medium for traditional skills and practices to be passed on by our Elders to our young people. The radio is also a good medium where stories, legends, myths can all be passed down to certain people. Some people are Ngunkaris and these people are like doctors who not only rely on their skills in how to help people but they also need a lot of certain plants which they rely on to help people get better. A lot of requests are received from non indigenous people wanting to be cured by Ngunkaris and we cannot always cater for them, but it is great to see non indigenous people wanting to get help from these traditional healers and a lot of these traditional healers are mainly Elders. Some young people have



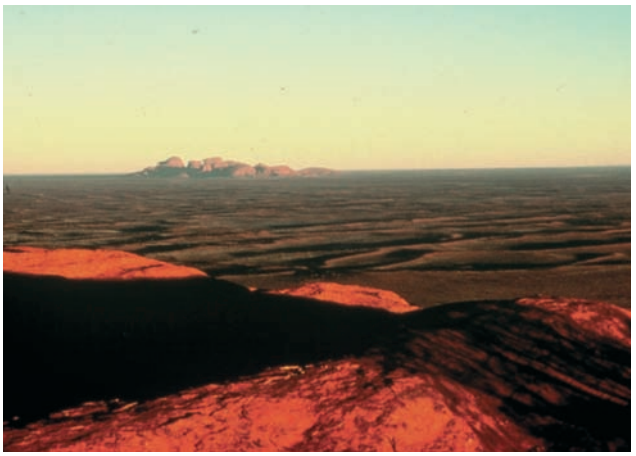


Fig. 4 Diagram depicting the joint management structure between the Park Management and Traditional Owners [left]

Fig. 5 The landscape covered by the National Park lease [right]

these skills and they have to be looked after, nurtured, carried by the old people so when they do become the right age they will hopefully pass on those same skills so they are never lost.

Programs in the park

Natural Cultural Resources section

Visitor safety is a concern in the Park, with walking tracks maintained on a regular basis. There is a lot of buffle grass, which grows at a phenomenal rate. The trouble with the buffle is that when it burns it is very hot and it tends to burn a lot of the native plants and trees. With the fires it increases the predator numbers because a lot of the mammals don't have enough cover to hide so it is important we take Anangu out and look at the landscape and see how, with their

knowledge and also with western skills, we can combine the two to hopefully come up with a way of looking after this precious landscape.

Visitor Management Safety Plan is very important because of the numbers of visitors who come through the Park and we do have concerns about the impact those visitors have on vegetation and the ground. We need to create a safe place for them to come into this World Heritage listed Park.

Information and Learning section

The Cultural Centre was built of natural products e.g. mud bricks, logs etc. This showcases the Anangu culture in this area. The Elders have approved of all the information that has been gathered by Parks over the years.

Joint Management section

This section is very crucial to uphold the Lease and Agreement with the government. The Lease is aboriginal land leased back to the Director. Flora & Fauna surveys are carried out on a regular basis, which is one way of keeping stock. Anangu work in many different sections of the Park - track work; monitoring and maintaining rock holes; fire management.

Threatened Species Network

At the moment we are reintroducing the *mala* or hare wallably, a very small marsupial which stands about 12 inches (30.5 cm) high. Nearby places have had great success in reintroducing the *mala* but a natural and safe habitat has to be created so these tiny marsupials can survive. There are a lot of feral cats and foxes that prey on these small animals so one of the bigger projects we are undertaking is to build a *mala* enclosure. It is almost completed.

Other concerns

Another concern is the amount of stones and sand being removed from the Park. There has been a lot of talk in the media and a film series about the sorry rocks because of the bad luck that it brings to some people, where whole families have had bad luck and they think it is the rocks, so they return them. The smallest piece could be smaller than a marble and the biggest piece weighed 30 kg. The more information and the more we talk about these issues the greater the positive response we have from people sending them back, and they explain some of the problems they have had and what they have associated the stones and sand with. Hopefully one day there will be some sort of ceremony to put the returned stones back, but because a lot of the people don't say where they got the stones, we cannot just throw them

One of the problems with rain which we have at one of the major sacred sites is because of the road that has created a dam, so the water cannot run away naturally and

it has been running off forming its own watercourse. Some of the trees very close to Uluru have been dying so to hopefully prevent this Anangu remove a lot of the earth, lay down stones and cover the stones up with special blankets, then cover everything with the earth and this has carried some run off so in the future a lot of the trees will not be affected, and this seems to be working very well.

A large number of tourists create problems walking around the track and if not monitored we could end up with a deep track into the ground, so it is very important to monitor.

Because of Anangu's spiritual affiliation with the land they know when to gather a lot of the food and will go out together to get a lot of the different fruits, berries and seeds from different trees. Some of the foods they eat are very good for them but today so many aboriginal people

Fig. 6 Fire management regime as followed by the Tjilpi Tjuṯa (Old Men) [left page, left]

Fig. 7 *Mala* wallaby [left page, right]

Fig. 8 Working together at Natural Cultural Resources [above]

Fig. 9 Visitor safety and monitoring rock art sites [below]

have medical problems because of the foods, where in the past they did not have these problems with the natural foods and plants.

Legal requirements apply under the following

Commonwealth Legislation

Environment Protection and Biodiversity
Conservation Act 1999
Environment Protection and Biodiversity
Regulations 2000 . Uluru Kata Tjula Plan of Management .
Aboriginal Land Rights (Northern Territory) Act 1976
Australian Heritage Commission Act 1975

Northern Territory Legislation

Heritage Conservation Act
Northern Territory Aboriginal Sacred Sites Act
Territory Parks and Wildlife Act

Lease

Uluṟu-Kata Tjuṯa Aboriginal Land Trust leased the Park to the Commonwealth (Director of National Parks) from 26 October 1985 to 25 October 2084

International instruments

UNESCO's World Heritage Convention
UNESCO's Man and the Biosphere Program

Fig. 10 Marsupial Mole, threatened species [above left]

Fig. 11 Tjakurra Skink, threatened species [above right]

Fig. 12 Management plans for Uluṟu-Kata Tjuṯa National Park [below]

The Qadisha: a biological, cultural, historical and religious heritage

Fady Asmar, Stephan Hobeika, Carla Khater and Georges Zouain, UNESCO-Beirut, Lebanon

Summary

Listed as a World Heritage Site since 1998, the Qadisha valley (or Kannoubine) and the Cedars of God Forest constitute a cultural landscape of exceptional universal value. Surrounded by steep mountains, the valley has for a long time been a refuge and a place for meditation. It contains an exceptional number of Christian hermitic and coenobitic monasteries, some of which belong to the early days of Christian expansion. The traditional land exploitation of terraces, calcareous caves and important biological diversity (fauna and flora) have endowed the area with natural and cultural added value.

An analysis of the interaction between the wealth of biodiversity and the landscape, the cultural and historical heritage of the Qadisha and the Cedars of God Forest has provided a better assessment and identification of its strengths and threats. The study of the specific character of this site leads to a better understanding of the importance of safeguarding and protecting this unique religious and cultural heritage, together with its exceptionally rich biodiversity and the legacy of the collective memory of a region and perhaps a whole country. Concern for the preservation of the valley is not only limited to the local inhabitants and users, it is shared by tourists, outdoor sports enthusiasts, religious entities in the valley and to those whom the site is a place of worship. Its preservation is also of concern for future generations.

Fig. 1 A view of the Qadisha valley

A remarkable natural, cultural and spiritual heritage

The Kannoubine valley is surrounded by traditional villages, distinguished by a specific character, charm and uniqueness. They show traces of very old human occupation, offer a traditional architecture of a great interest and contain some perfectly preserved water mills. The Qadisha valley and the Cedars of God Forest have been on the World Heritage List since 1998.

Situated downstream of Mount Mekmel, the Qadisha valley is irrigated by the Qadisha River (35 km long) which springs from beneath the Cedars Creek. The calcareous lithology, dating back to the Jurassic period, presents karstic facies which explains the presence of a high number of caves, often situated in cliffs high above the valley floor. The Qadisha valley contains an important religious heritage in both constructions and caves. It is here that the highest concentration of caved monasteries and hermitages (115 in total) dating back to the origins of Christianity can be found. It offers a facies of steep cliffs where the first Maronites used to hide in grottos (there are twenty-nine grottos in the valley) with difficult access from the valley, sometimes at an altitude

of more than 1,000 m. The lack of comfort in these grottos provided an appropriate environment for monastic contemplation. Over the years, the presence of hermits strongly contributed to the sacred character of this valley. During the Palaeolithic era, some of these grottos were used as shelters and sometimes as tombs.

Since the beginning of the Christian era, the Holly Valley has served as a refuge for people looking for solitude. From the seventh century the Syrian Maronites moved there to hide from religious persecution. This movement intensified in the tenth century after the destruction of the St Maroun Monastery. The Maronite monks then established their new centre in Kannubin, in the heart of the Qadisha. Monasteries combining hermitic and coenobitic life started to extend all over the

surrounding hills. However, the Holy Valley was not only the centre of the Maronite culture, as other Christian communities found their shelters in the cliffs: Jacobites (Syrian Orthodox), Melchites (Greek Orthodox), Nestorians, Armenians and even Ethiopians.

Overlooking the valley, the Lebanese cedar forest (*Cedrus libani*) contains around 375 trees. According to local beliefs, two of these trees are said to be more than 3,000 years old and ten trees are more than a 1,000 years old. One of the oldest written texts in the world, the *Epic of Gilgamesh*, discovered in Central Mesopotamia, describes the Cedars of Lebanon as sacred trees. These giant trees have witnessed the history of humanity. A multitude of legends and historical facts linked to the cedar contribute to the sacred character, to the extent that until the end of the nineteenth century the Maronite Church used to excommunicate those who dared harm any one of the sacred trees. There is a local belief that the transfiguration of Jesus Christ occurred in this sacred forest. The Church of the Transfiguration (Figures 2 and 3), built at the heart of the forest, is visited by thousands of pilgrims every year in August to celebrate this very important event in the Christian faith. Local beliefs suggest that as God planted those trees, He will look after them and protect them. Since the seventeenth century this sacred forest has been visited by pilgrims and tourists from all over the world to pray and to admire the beauty and charm of its monumental trees. Historical information confirms that the famous cedar forests of Lebanon were initially threatened during the period of Justinian the First, in the sixth century. Around 1870, Queen Victoria of England ordered the building of a stone wall around the forest to protect it.

The economic, tourist and heritage challenges linked to the valley

As in most of the rural areas in the Mediterranean region, the valley has been exploited over centuries, even millennia.

This exploitation has shaped the landscape. The space is organized around four main components: the *hortus* (gardens around the houses and the convents, with intensive cultivation of fruits and vegetables); the *ager* (cereals and legumes grown on terraces); the *silva* (the forest, a source for building wood and fuelwood, frequently grazed) and the *saltus* (an intermediate woody space used for pastoralism, and for some temporary

cultivation). Because of the very steep gradient of the slopes, the development of agriculture was only possible by building terraces, which increased both the surface to be planted and the water-holding capacity of the soil. It is on these terraces that cultivation of olive trees (for olives and for oil), vines (producing grapes used to make *arak*, table wine and communion wine for churches), mulberries (for fruit and as a habitat for silkworms), different fruit trees, cereals, pulses and vegetables was developed. These crops were very difficult to maintain and were labour-intensive. The monks had to share their time between prayers, religious obligations and farming. The local farmers spent their time on agriculture for survival.

The various economic and sociopolitical crises that occurred in the region have forced the local people to abandon their villages to look for better-paid jobs elsewhere. The abandonment of the good practices and maintenance of the area has had very negative impacts on parts of the territory, because of the soil degradation resulting from abandoned and non-maintained terraces. However, the abandonment of agricultural practices has also had a positive impact: a rise in biodiversity and the regeneration of the natural forest vegetation on the abandoned terraces.

Nowadays, the different forms of exploitation have lost their importance in the valley. Forest exploitation is no longer viable; agriculture and pastoralism no longer constitute the primary source of income. Pastoralism is no longer perceived as an activity integrated into the rural space but rather as harmful and aggressive to the forest and the natural vegetation. Local inhabitants have yet to understand the importance of ecotourism in socio-economic development. The economic value of market and non-market products (such as landscape and lodging) is far from understood as an important potential source of income.

Despite the abandonment of agriculture, forestry and pastoralism, and despite hesitancy about such newly developed activities, the valley still benefits from an emotional value in the eyes of the local inhabitants, and of Lebanese people in general. This emotional dimension is most certainly linked to the symbolic value of the valley, and what it represents at the historical and heritage level:

Figs. 2 and 3 Views from the interior of the Church of the Transfiguration [left page]
Figs. 4 and 5 The Cedars of God Forest

the emotions it provokes and the intimate relation it has created with the inhabitants. There is a common will to protect the valley, to benefit from its attributes while ensuring the transmission of this heritage to future generations.

Natural and cultural diversity: challenges and perspectives

The natural territory of the Qadisha is fragile and subject to several constraints. The constraints are mainly linked to the climate and its irregularities, to soil and the narrow widths of stretches of land, and particularly to human activities. In order to deal with these constraints the early inhabitants developed complex technical solutions like building terraces on the slopes.

Witnesses of the human impact on the valley, these terraces are now an integrated part of the landscape of Qadisha. The preservation of the valley can only occur through the preservation of the different elements that compose the landscape. The lack of interest in agriculture and the abandonment of the terraces have not only affected the organization of the landscape, but have also modified biological dynamics by bringing about the reappearance of the forest, and later the enrichment of the area with native animal and plant species. Eventually, the continued abandonment of agro-pastoral activities in the valley will lead to a progressive decline of the milieu, causing a profound modification of the landscape, a change in biological equilibrium and a loss in biodiversity. This situation usually leads also to an increase in the risk of occurrence of forest fires because of the thick pack of litter and dead biomass accumulating in the woodland.

Despite their economic and ecological value, the valley landscapes are increasingly degraded and threatened. There is no doubt that several animal species have migrated, looking for more welcoming habitats, and several plant species have completely disappeared.

The cedar (*Cedrus libani*) remains by far the best known, the most respected but also the most over-exploited species, because of its beauty and the firmness and lasting nature of its wood. Wood from the cedar forests was used for crafts, carpentry and building structures. The tops of the tree were trimmed at an early age, causing the vertical growth of the remaining horizontal branches, giving the trees their candlestick-like shape with several trunks. At maturity, some of these trunks were felled and the others were left on the tree to insure the sustainability and the permanence of the forest. The Cedars of God Forest was not subject to such treatment as it has always benefited from its legendary, religious and tourism value.

The wealth of flora in the region is certainly not limited to the cedar. The plant formations of the different vegetation stages between the valley and the Cedars of God Forest are composed of several species. evergreen cypress (*Cupressus sempervirens*), brutia pine (*Pinus brutia*), oaks (*Quercus calliprinos, Quercus infectoria*), plane (*Platanus orientalis*), green laurel (*Laurus nobilis*) and wild apple and pear (*Malus trilobata and Pyrus syriaca*) are only a few species of the arborated stratum of the region. They are accompanied by different arbustive and herbaceous species, such as oregano (*Origanum syriacum*), berberis (*Berberis libanotica*) and sage (*Salvia trilobata*).

Although frequently accused of strongly contributing to the degradation of the natural vegetation in Lebanon, goats have always played an important role in the life and survival of the local inhabitants. Unlike sheep and cattle, the local goat is very dynamic and adapted to the landscape. Meat, milk and its byproducts have always provided a good source of protein to rural societies throughout Lebanon. Fermented goat's cheese is one of the local products under threat. Goat meat was the only red meat consumed, eaten either raw or cooked, until very recently.

The progressive disappearance of the open spaces and the traditional agricultural and pastoral practices could cause great losses in biodiversity and agro-biodiversity. The progressive encroachment and invasion of bushes in the agricultural fields, fruit orchards and open spaces is one of the major causes of landscape degradation.

When an area becomes abandoned an entire page of history disappears, taking with it the charm and the mystery of the site. The area becomes wild and less welcoming, while no one remains to maintain the landscape, cultivate the land and host visitors and tourists.

The concept of the Mediterranean garden, combining the *hortus*, *ager*, *silva* and *saltus*, allows for the conservation of the landscape and the preservation of the natural landscape and cultural heritage. Organized tourism, respecting the assets and the diversity of the landscape, would add value to the area.

Possible scenarios

The critical situation of the valley is the result of all the stresses on site, and all the possible future scenarios for Qadisha depend on several factors conditioned by the complexity of the challenges associated with the area.

A negative scenario could be based on the appropriation of the site by external actors. Concerned local stakeholders have a diverging point of view regarding the utilization and the management of the area. Some may be pleased with the installations and ecological initiatives; others may see them as a hindrance to their economic development, since they are likely to be based mostly on seasonal tourism, keeping in mind that most of the houses are being transformed into secondary residences.

Local tourism has not yet integrated all the dimensions of ecotourism and sustainable development. The local

inhabitants do not all have the capacity to lodge tourists on their premises. If some benefit from the support of certain ecotourism operators, the infrastructure is so basic that it could not satisfy the requirements of demanding visitors. With the exception of a few elderly, almost no one lives in the valley. In order to be able to lodge visitors, there would need to be a return to the original living conditions: that is, traditional cooking utensils and tableware, and a revival of the traditional culinary and architectural traditions. Furthermore a certain level of comfort and quality would be expected.

However, high pressure on the land caused by buildings ill-adapted to the area, combining the need for urbanization and modernization, uncontrolled mass tourism, the lack of authenticity and the almost nonexistent management, will certainly lead to a loss of identity, with the result of declining tourism and eventually the degradation of the site.

A positive scenario offers an ideal vision aiming to solve the different problems. Visits are properly managed; traditional rural activities are strongly put into practice; forest exploitation and agro-forestry are maintained, taking into account the multiple functions of the forest; the conflicts of use are reduced by attracting environmentally conscious visitors who are aware of the importance of the site and respectful of the property and presence of forest guards, guides and rangers; and the local values are developed. The development of a new form of responsible tourism would allow for the creation of new jobs and for the proper evaluation of the landscape. Some of the young people would return to live in the valley, which would be thriving. The spirit of the valley would be respected and above all it would remain an important place for prayer and pilgrimage. Any activity and development that does not take into consideration this spiritual dimension would be detrimental to the site. This scenario supposes a participatory management of the land by all the concerned stakeholders.

Recommendations and proposals for action

* Equilibrium between the *hortus*, *ager*, *silva* and *saltus* should be sought, by integrating into this system some modern dimensions like ecotourism and local industries, and the implementation of social and environmental services. The sound and progressive reintroduction of human activities into the landscape of the Qadisha will allow for the redynamization of the local economy while respecting the landscape values and favouring the proper extension of the *silva* component of this landscape.
* Traditional agriculture should be used as a tool for the maintenance of the forest and open spaces (mainly in the valley). This will allow for opening up the space, favour the enrichment of the biodiversity and be economically beneficial towards a sustainable development policy.
* The different ecosystems should be managed at the landscape level, going beyond the limits of municipalities.
* A participatory approach should be adopted in the decision-making process for all issues related to the management and development of the site.
* The management and the conservation of sensitive species should be focused on the habitats of endemic species, and the populations of rare and threatened species should be identified and preserved.
* The ecosystems of major interest should be preserved: cedar forests, riparian formations, particular ecotones, cliffs and so on.
* Zones should be identified in the forest populations where trees would be allowed to grow old without any intervention, and others where agro-sylvo-pastoral activities would be allowed and managed.
* Strong regulations should be applied and enforced for issues like walking only on the assigned tracks, biotope protection, geological reserves and so on.
* The landscaping aspect should be taken into consideration when undertaking and implementing structures, activities and buildings and so on.
* Elements of the rural, historical, cultural and religious heritage should be preserved, promoted and valued.
* The protection and eventually the restoration of the soils and the threatened zones should be ensured.
* Different uses should be conciliated by:
  - favouring meeting and the mediation between the different users of the site
  - improving the organization of the reception of the public and the management of the sensitive sites
  - analysing and discussing the different proposed initiatives for the reception of the public
  - ensuring the presence of field agents with specific missions to apply legislation and regulate access to sensitive sites, to sites for meditation, education, follow-up and supervision
  - encouraging the replacement of sporting activities with a negative impact by activities respectful of the nature of the site.
* The actors and the users of the site should be better educated, sensitized and trained by:
  - reinforcing education at school and youth levels on the importance of the valley, the threats and challenges
  - putting in place training sessions on the sustainable management of the valley, for the different stakeholders: guides, land owners, politicians and so on
  - involving tourism and leisure professionals and user groups in the conservation of the valley and the conciliation of different uses, through raising the awareness of the users on issues like the application of codes of conduct, quality charters and quality labels.

Conclusion

Today, tourism represents one of the world's major industries. The Qadisha valley and the cedar forests are an important local and international tourist destination. Visited for the diversity of its landscapes, the hospitality of its people and the cultural and historical richness, Lebanon has a lot to offer.

Overexploitation of natural sites leads to increasing pressure on wild species and increasing stress on natural ecosystems. Hence the need for sustainable tourism, which is respectful of nature and the local population, where bicycling, donkey rides and trekking could replace the more aggressive and intensive outdoor activities.

The fauna and flora characteristics of the Qadisha are fragile and require real efforts to preserve them. In this respect, the natural environment and the biodiversity in the valley are subject to perpetual degradation through causes such as increasing urban pressure disfiguring the landscape, anarchic tourism which is frequently disrespectful towards the site and pollution of the water resources. This would eventually lead to a loss of identity in the valley.

The religious legacy of the valley was adapted to the natural landscape, mainly with the exploitation of the lands for agriculture (for example, thorough cultivated terraces) and small industries (such as silk from silkworms) and even with the domestication of the site, even though it was reputed to be a hostile environment for humanity (with troglodyte habitations, monasteries and churches). The religious stakeholders of the Qadisha have over the centuries invested in the valley. The preservation of the local biodiversity is therefore an important commitment to the durability of the collective memory of the religious community and of the local inhabitants.

Is it not possible to integrate the conservation and preservation of the natural heritage of the valley into a more global landscape approach? If the scale of the site management policy were extended so that it covers the entire landscape or region, and the creation of development options and tourist attractions in the surrounding villages, would this not represent a sustainable alternative for the management of the valley itself?

Acknowledgements

The photographs were taken by Fady Asmar, Aoun Abi-Aoun and Fares Jammal.

References and further reading

Asmar, F. 2000. *Ecology, Genetic Variability and Conservation of the Lebanese Cedar*. Lebanon, Mediterranean Agronomic Institute of Chania.

Bourlon, S. 2004. *Charte forestière de territoire du parc naturel régional du Luberon*. Etude de cas. Projet Forêts Méditerranéennes et Développement Durable. Silva Mediterranea, FAO, République Francaise, PNUE, Plan Bleu, Parc Naturel Régional du Luberon (In French.)

Burel, F. and Baudry, J. 1999. *Ecologie du paysage: Concepts, méthodes et applications*. Paris, Editions Tec & Doc. (In French.)

De Borman, D., Cordier, M. and Lejeune, J. 2004. *Séminaire international inter-universitaire sur la gestion durable du territoire de la Qadisha*. Belgium, Faculté Universitaire des Sciences Agronomiques de Gembloux (In French.)

El Ard. 2003. ***Env****ironmental Survey of Bcharré disctrict*. Final report, JICA Study Team. Study on the integrated tourism development plan. Republic of Lebanon.

ICOMOS and IUCN. 1998. *WHC Nomination Report, region Arab states*. International Council on Monuments and Sites and World Conservation Union.

MOA and UNEP. 1996. *Etude de la biodiversité du Liban*. Projet : GF/6105-92-72. 9 volumes. Ministry of Agriculture and United Nations Environment Programme (In French.)

Montgolgier, J. de. 2002. *Les Espaces Boisés Méditerranéens, Situation et Perspectives*. Les Fascicules du Plan Bleu. Economica (In French.) See: www.planbleu.org - UNEP's Blue Plan's Environment and Development Outlook.

Mouterde, P. 1966. *Nouvelle Flore du Liban et de la Syrie*. 6 vols. Editions de l'imprimerie catholique Beyrouth. (In French.)

Sfeir, P. 1986. *Les ermites dans l'église maronite. Histoire et spiritualité (du Vième au VIIième siècle)*, Lenanon, Eds Kaslik. (In French.)

UNESCO. 1998. *Convention Concerning the Protection of the World Cultural and Natural Heritage*. 22nd session. Committee Report. Kyoto, Japan, 30 Nov–5 Dec 1998.

Fig. 6 The Qadisha valley [left]

Fig. 6 A natural spring in Qadisha valley [right]

The intangible values of Lanín National Park, Neuquén Province, Argentina

Laura Chazarreta, Lanín National Park, Argentina

The challenge of intercultural practice

Lanín National Park is a protected area where a process of co-management with Mapuche First Nation communities is taking place. This process is being carried out through the highest authorities of both the Mapuche people and the National Parks Administration. It is based on political agreements that recognize the rights of self-determination and territorial integrity, in the broadest sense of the word, for the First Nations people. This is the most important strength of this process, after many, many years of bad relations between state governments and First Nations.

Experience has shown that an intercultural relationship is imperative. It means that different peoples and cultures have to begin to know each other, and learn to recognize and respect diverse points of view. This process requires a great deal of patience and tolerance, because there is no one culture that is more important than another. Prejudices are often deeply rooted, and thus it is difficult to make the required changes. As written by Carl Rogers, the humanist psychologist:

> 'the Community, the Nation or the Culture have determined what is the real world'. Different cultures have upheld world visions that are quite distinct, which is not bad in itself, except for the 'intolerance of that which is different'.

Intolerance presents a real challenge which has to start with a change of attitude and an opening of mind and heart. Intercultural practice is a process that requires the cultures involved to contribute their own knowledge, traditions, and beliefs, because only from truly intercultural practice can intangible values be protected.

The identification of sacred natural sites can be an efficient tool, used to develop both aspects: the recognition of priority values for each culture, based on mutual respect, and the protection of intangible heritage through land management. This challenge forced us to search for alternatives to reach these objectives.

Human values

In Lanín National Park, we have started by trying to create awareness of this issue among all stakeholders, not only

about intangible values and their links to natural and cultural resources, but also by emphasizing that we only can protect what we value, and we only can value what we know. Intangible heritage is the whole set of values that identify a culture, a people, a group or a person, through artistic expression, knowledge, traditions and beliefs. This subject is clear, and yet a sensitive one, for First Nation people, but not so clear for those cultures whose origins are often mixed and diffuse This situation produces an increasing loss of 'sense of place and past', and as a consequence, individuals live in a permanent search for identity.

However, for those people who have no religion or artistic skills, or have no familiar or collective traditions, where are their sacred sites? Do protected areas fit the bill? After all, they are spaces where one can find interior peace, feel a connection with nature, and perhaps find the purpose of one's existence, and discover one's more hidden and beautiful human potential.

In Lanin National Park, we have accepted the challenge of introducing those intangible values that are hidden in the natural and cultural landscapes, into the process of planning and management. We propose to accomplish this by integrating this topic into societal conscience through language, social awareness, and finally, through people's hearts. We intend to accomplish this through activities that connect the different elements of society in sharing those intangible heritage values that all cultures hold in common, (beauty, peace, appreciation) through artistic expressions like music. In our essence, we are wiser than our intellect, and our body as a whole has a purpose and wisdom that goes beyond conscious thinking.

There is another concept that we are taking into account, and that is, assigning value is a human act. People create values and values create people. Often, one of the most important values is that of people themselves, with their intentions and feelings, and their gifts and goodwill to make the world a better place for all. That is for us, one of most important intangible values of Lanín National Park. We are well disposed to go beyond the boundaries imposed by ignorance and tradition to fashion Lanín National Park as a Peace Park in all its different meanings.

What can we do to reach that aim?

As a beginning, we asked Allen Putney, leader of the Task Force on Cultural and Spiritual Values of the World Conservation Union (IUCN), to share with us his own vision of 'The Sacred Dimension of Protected Areas', and he has made presentations at two town meetings near the park. It was a positive experience, because many people who have no specific relationship with protected areas came to hear him. The local press showed great interest, and the intangible values of natural areas were a recurrent topic during days following his presentations. We can say that this first experience was successful.

Our next step will be to develop a photo exhibit. People will be asked to contribute photographs that express their particular vision regarding the sacred dimension of Lanin National Park. Another activity that is planned is a musical event; a show which will feature as broad a spectrum as possible of ethnic sounds and rhythms from ancient and modern cultures that invite us to dance. At the same time, this will be a gathering which will allow us to display materials about other experiences around the world related to this topic, thereby maintaining the interest of the people. Looking toward the future, we hope to develop a multicultural team to work on intangible heritage, reviewing current protection categories and creating more specific ones that encourage the identification and protection of sacred or special sites.

Fig. 1 Lanín National Park [left page, left]

Fig. 2 Musical event to hear unknown sounds and rhythms that invite us to dance… [left page, right]

Fig. 3 Local management committee of Ñorquinco Mapuche Community [left]

Fig. 4 Recognition of priority values of each culture [right]

The Delos Initiative: sacred natural sites in technologically developed countries

Thymio Papayannis, Mediterranean Institute for Nature and Anthropos, Greece and Josep M. Mallarach, Fundación de Estudios Tradicionales, Spain

Summary

The Delos Initiative is the only working group of the World Conservation Union (IUCN)/World Commission on Protected Areas (WCPA) Task Force on Cultural and Spiritual Values of Protected Areas that is focusing on sacred natural sites in technologically developed countries. After discussing some crucial considerations related to the context and background of the dominant Western ideology with respect to natural areas, this paper presents the purpose, objectives, methodology, action plan and current developments of the Delos Initiative, namely the establishment of the working group and site selection in three continents. Although pilot plans will be carried out in several countries during 2005, most actions are expected to be performed in subsequent years.

Introduction

The designation, planning and management of the current protected area systems in technologically developed countries is usually based on approaches that only take into consideration a certain number of the multiple dimensions that can link people and nature. These technical scientific approaches do not give a balanced account to the full spectrum of values of protected areas: cultural values tend to be reduced to their material components, whereas spiritual values are usually ignored. Consequences of this loss are widespread and more significant than is often accepted.

The International Symposium on Natural Sacred Sites: Cultural Diversity and Biological Diversity Conservation, held in Paris in 1998, and the Fifth World Park Congress held in Durban, South Africa, in 2003, stressed the need to give full recognition to cultural and spiritual values in order to promote a truly integral policy of nature conservation, which can obtain much broader social support. In addition, the UNESCO Convention on the Protection of Intangible Cultural Heritage, which endorsed Durban's conclusions in 2003, was a significant step towards the international recognition of non-material values. As a result of the Durban Congress, the IUCN/WCPA Task Force on Cultural and Spiritual Values of Protected Areas (CSVPA) was established. Since then it has done considerable work on sacred natural sites in several continents, mostly in developing countries of Central and South America and Asia.

The general attitude in technologically developed countries with respect to natural protected areas is determined by the prevalent positivistic and materialistic outlook of modern science, which has caused a weakening, or even a loss, of the spiritual dimension of nature, as well as other deep cultural connections related to the immaterial values of natural areas. The once pervasive concept of sacredness of nature has usually been reduced to certain exceptional locations such as 'natural sanctuaries', if not completely eliminated, except in those countries where native people, having a primordial spiritual tradition, are still safeguarding this concept as a crucial component of their way of life.

Therefore, the adoption of a holistic approach of the protected areas and the non-material values they carry becomes a serious challenge. It has been acknowledged that taking into consideration vernacular knowledge, the connection to the land and deep-rooted traditions, such as pilgrimages or celebrations developed in natural environments, would increase understanding and support of protected areas by the local population. On the other hand, the qualitative values of nature, such as beauty, grandeur, loneliness, harmony and balance, are of immediate and universal understanding, demanding recognition and protection. In short, a more receptive attitude towards spiritual and cultural values could help the inclusion of wide social feelings that have been marginalized by the materialistic scope, fostering a more balanced management approach of protected areas where these values are significant.

Since the context found in developed countries is quite different from that in the rest of the world, the idea came up to initiate within CSVPA a parallel and complementary action on sacred natural sites found in technologically developed countries. It followed an exchange of views on the significance of these sites in the developed world, held in July 2003.

The concept was circulated among the members of the Task Force in early June 2004, and at that time Thymio Papayannis, member of CSVPA, became the coordinator of this action, later assisted by Josep M. Mallarach, member of CSVPA, while the administrative work is coordinated by social anthropologist, Irini Lyratzaki.

This is the first paper that has been prepared for public outreach purposes. The Initiative was named after the Aegean island of Delos, a biotope with considerable marine interest, which was considered sacred in classical times, dedicated to Apollo (the god of light) and the centre of a long-lasting alliance.

General purpose and objectives

The purpose of the Delos Initiative is to identify the pertinence and meaning of sacred natural sites found in the technologically developed world, and to investigate whether and how spiritual values can contribute to the conservation and wise use of significant natural areas, as well as the maintenance of cultural heritage, in this part of the world. It will focus on sites of high natural heritage value with a definite protection status that are representative of world religions and spiritual traditions.

More specifically, the objectives of the Initiative are as follows:

* Understand the position of the major religions in developed countries on nature and on the sanctity of natural sites.
* Assess the pertinence and importance of sacred natural sites for contemporary people, and attempt to estimate the significance of their spiritual values.
* Study how these spiritual values can be maintained and enhanced, and investigate whether and how these values can be used as a tool for the conservation of sites.
* Attempt to resolve eventual conflicts between the character of sacred sites and conservation and management requirements, establishing instead synergies, where possible.

Methodology

The methodology of the Delos Initiative combines two complementary approaches: one bottom-up and one top-down. The bottom-up approach will be based on the analysis of specific sites, in order to:

* identify participants and sites in representative countries
* examine the objectives at the local level
* debate results of analysis with different stakeholders to reach common conclusions
* generalize results and extrapolate them to a broader level.

The top-down approach will apply the basic metaphysical principles that all spiritual and religious traditions share, such as the symbolic character of nature, the sacredness of – at least certain – natural theophanies, and as a corollary, the awe and deep respect for the natural order, as a terrestrial reflection of a celestial or divine order. So it will be possible to proceed to:

* identify underlying principles of different spiritual traditions
* examine their pertinence and influence on different contexts
* propose and validate relationships and analogies.

Action plan

The work of the Delos Initiative will proceed in a sequence of a number of steps.

* Establishment of a representative working group. At present there are fifteen people involved, from five countries in three continents: E. Barrow, Kenya; B. Boot, Australia; D. Byrne, Australia; E. Conner, Australia; J. Falgarona, Spain; J. García-Varela, Spain; L. Hamilton, USA; J. Laver, China; I. Lyratzaki, Greece; J. M. Mallarach, Spain; G. Oviedo, Switzerland; T. Papayannis, Greece; G. Pungetti, Italy; A. Putney, USA and R. Wild, United Kingdom.
* Selection of case studies in different world regions. Participating members have proposed, or will propose, one or more sacred site(s) selected from technologically developed countries, with which they are familiar. The target is to have a representative sample of sacred natural sites from all continents, including a diversity of mainstream religions in countries with different social attitudes regarding nature and the sacred.

Sacred natural sites should be selected among those that have been established as natural protected areas. They should include sites with a strong contemporary religious/spiritual importance, as well as those that represent past beliefs and maintain only heritage values, giving priority to sites where people are interested in an integrated approach to the spiritual and natural heritage. Their spiritual significance, present or past, is essential. Thus it would be desirable to include sites that have a strong contemporary religious

importance, as well as those that represent past beliefs and maintain only heritage values.

Thus, the Delos Initiative will be concerned with three different groups of sacred natural sites: sites related to mainstream religions, sites related to indigenous people's traditions living within technologically developed countries, and sites related to religions of the past, either historical or pre-historical, that might or might not have spiritual significance for contemporary people.

Preliminary actions: pilot plans and presentations

After finalizing the list of sites, each participant will be asked, first to establish contact with appropriate local stakeholders (religious groups, local authorities, and so on) and convince them to participate in the action; and next, to provide information on these sacred natural sites, on the basis of a uniform questionnaire.

The Delos Initiative has already been presented at some national and international conferences, such as the Congress of the Europarc Federation in 2004 and the Congress Esparc 2005 in Spain.

Debate on key issues

A debate will then be organized among the participants on key questions related to the objectives listed above. Each issue will be presented, with a short introduction, and will be discussed for a given period of time. The participants will be asked to relate their comments to the specific site for which they are responsible, after discussion with their local contacts, as well as to analyse threats and challenges and to suggest concrete measures that could be implemented. At the end of each round, the conclusions will be edited and disseminated. In parallel, there will be a systematic exchange of views with the executants of the other projects of the CSVPA that are concerned with indigenous and traditional peoples in developing countries, so that the understanding of common issues can be enriched.

Subsequent steps will include the development and analysis of selected case studies, intranet debates, and finally a participatory workshop to elaborate the conclusions. Conclusions of the Delos Initiative will include a diagnosis, proposals to IUCN, WCPA, UNESCO and other bodies and dissemination of results through different channels: a book, web pages and possibly a DVD. If the initiative is sufficiently participative, the final publication will include guidelines on the management of sacred natural sites in technologically developed countries, illustrated by the case studies that have been analysed.

Procedural aspects

Development of the Delos Initiative activity will be hosted on the website www.med-ina.org/delos/, allowing the participation of other interested individuals. The first phase of the work can rely on auto-financing by the participants, including the coordination tasks, as the costs involved are limited. Workshops and further work could result in one or more projects with outside funding. The eventual editing and publication of a book would require raising the necessary funds.

Proposed sacred natural sites

So far there have been proposed the following sites, on three continents:

* the island of Patmos, Aegean Sea, Greece: a Natura 2000 site
* Mount Athos Peninsula, Greece: a World Heritage Site and Natura 2000 site
* Delphi and Parnassos National Park: a World Heritage Site, Greece
* Meteora World Heritage Site, Greece
* Montserrat Nature Park, Catalonia, Spain
* Doñana National Park, El Rocío, Andalusia, Spain
* Serra de Tramuntana Protected Area, Lluc, Balearic Islands, Spain
* Covadonga, Picos de Europa National Park, Asturias, Spain
* Holy Island of Arran, Scotland, United Kingdom
* San Francisco Peaks, California, USA: a large cultural sacred coastal area, which includes Mumbulla National Park, New South Wales, Australia.

Additional sites are being evaluated in Italy, France and Canada. It is intended to include some sites from countries in Asia such as Japan.

Appendix: summary description and interest of some case studies

Doñana, El Rocío, Spain

The most important wetland of Spain, Doñana National Park is located at the mouth of the Guadalquivir River, Atlantic coast, in south-west Andalusia. At the border of the marshland is located the shrine of the Virgin of El Rocío (the dew), where the most important pilgrimage of Spain takes place every spring. Over one million pilgrims participate on foot, by horse, or by wagon, walking through the dunes and marshlands, chanting and praying for several days, sometimes causing local conflicts over the protection of fragile flora communities.

Holy Island of Arran, United Kingdom

This was the site of the hermitage of the sixth-century St Molaise, and housed a twelfth-century monastic community. It has recently been bought by a Tibetan Buddhist organization, which is in the process of establishing a retreat centre and interfaith conference

facility. A Marine Protected Area has recently been established next to the island. The new community has stimulated documentation of the earlier Celtic spiritual tradition, put in place appropriate conservation management, and reopened the island to visitors wishing to appreciate the sacred in nature.

Montserrat, Spain

With its thousands of stony pillars of outstanding beauty, Montserrat has been considered a sacred mountain since prehistoric times, becoming a Nature Park in 1987, after a fire burned a large portion of the evergreen oak forests of its slopes.

It includes a medieval monastery dedicated to the Holy Virgin Mary, patroness of Catalonia, which was the main pilgrimage centre of the Kingdom of Aragon from the fourteenth to the seventeenth century. The Benedictine monastic community still has significant cultural and spiritual influence.

Montserrat currently receives about two million visitors per year, both tourists and pilgrims, causing stress to both the calm of the monastery and the natural integrity of the environment.

Mount Athos, Greece

The 'Holy Mountain' is a peninsula of rich history, with a continuous living tradition of more than a millennium, with rich biodiversity and a unique landscape beauty. Although its access is limited (women are not allowed) the flow of visitors has become a menace and has necessitated the setting of quotas. Modern living requirements (especially transportation by automobiles) have resulted in the construction of a dense network of roads, with negative impacts on the landscape. The monks in the thriving community on Mount Athos are now young, well-educated and come from urban backgrounds. Environmental problems, especially waste disposal, remain unsolved.

Island of Patmos, Greece

Well known as St John's island, where he wrote his Revelations, Patmos is located in the Aegean Sea, crowned by a famous monastery, and has been considered sacred even to our days. There are restrictive regulations on both building and recreation activities. Tourist pressures, however, and the spreading secular character of modern Greece, have eroded the implementation of such regulations, with noisy bars operating close to the monastery and tourist facilities being constructed in the vicinity of particularly sacred places.

South Coast Sacred Cultural Landscape, New South Wales, Australia

This includes an interconnected and interrelated network of landscape features that form a large sacred cultural landscape. The mountains include Gulaga (Mount Dromedary) and Didthul/Balgan (Pigeon House Mountain) among others, and there are also other associated geographical features such as islands and coastal lakes. The site contains the Mumbulla Mountain, a mountain sacred to the Yuin Aboriginal people.

The Yuin led a campaign to stop logging at Mumbulla Mountain, and this eventually led to the area being declared a National Park. Negotiations are taking place to return the park to Aboriginal ownership, after which time it would be jointly managed by the Yuin people and the NSW National Parks and Wildlife Service.

San Francisco Peaks, USA

Three volcanic peaks of around 3,660 m rise out of the dry Colorado Plateau, just north of the city of Flagstaff, Arizona. They are snow-capped in winter, with forested slopes, in contrast to the surrounding dry open *piñon* and juniper woodland or open grazing land. This isolation gives these San Francisco Peaks a high biological diversity value.

Named after St Francis, these peaks are sacred or have high cultural significance to thirteen Native American tribes. To the Navaho Nation, they are the western one of the four sacred mountains that define their territory and culture. Known as *Doko`oo`sliid* (Shining on Top), they are also a key place where medicine men collect herbs for healing ceremonies. To the Hopi, the peaks are *Nuvatukaovi*, house to the ancestral *kachina* spirits. To other tribes they are sacred places where the Earth brushes up against the unseen world.

The San Francisco Peaks are part of the Coconino National Forest, administered by the US Forest Service, whose guiding principle is 'multiple use'. Under this regime, the Peaks have seen a ski development on the north slope, and a pumice mine on the east slope. A proposal to expand the pumice mine in 1998 was defeated by an alliance of native American Tribes and environmental non-government organizations (NGOs).

In 1997 the Snowbowl Resort proposed an expansion, upgrading of trails and use of treated wastewater from Flagstaff to make snow. Opposition to this sacrilege led to the formation of a thirteen-tribe Save the Peaks Coalition in 2004, when it appeared that the Forest Service was supporting this development. In March 2005 the Forest Supervisor's decision was to allow the development. The Coalition is fighting the decision by appeals to higher levels. It seeks greater national and international support in this, and is hoping to give the Peaks some kind of international protection, such as Associative Cultural Landscape World Heritage status and/or a UNESCO Biosphere Reserve.

Session 9

Protective and legal measures for sacred sites in the context of the Akwé:Kon Voluntary Guidelines

Cultural, environmental and social impact assessments based on the Akwé:Kon Voluntary Guidelines

John Scott, Convention on Biological Diversity, Canada

Introduction

The workshop on cultural, environmental and social impact assessments based on the Akwé:Kon Voluntary Guidelines for the Conduct of Cultural, Environmental, and Social Impact Assessment regarding developments proposed to take place or which are likely to impact on sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities, was aimed at further strengthening the understanding of the link between environment and cultural diversity. It was conducted in cooperation with the Symposium on Conserving Cultural and Biological Diversity: The Role of Sacred Natural Sites and Cultural Landscapes, an activity of the World Expo 2005 in Aichi, Japan. The Workshop on the Akwe:Kon Voluntary Guidelines was also conducted in partnership with UNESCO, the United Nations Permanent Forum on Indigenous Issues (UNPFII), the United Nations University (UNU) and the Food and Agriculture Organization of the United Nations (FAO).

The following information is provided to inform discussions and to raise awareness of the role the Convention on Biological Diversity (CBD) plays in the respecting, preservation and maintenance of knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant to the conservation and sustainable use of biological diversity.

The CBD was opened for signature in 1992 and entered into force in December 1993. To date 188 parties have ratified the Convention. In the CBD, the international community acknowledged the close and traditional dependence of many indigenous and local communities on biological resources, the vital role that these resources play in their lives and livelihoods, and the important contribution that traditional knowledge can make to the conservation and sustainable use of biological diversity.

The Conference of the Parties (COP) has recognized that the CBD is the primary international instrument with the mandate to address issues regarding the respect, preservation and maintenance of knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant to the conservation and sustainable use of biological diversity (Decision VI/10, preambular paragraph 8).

The Parties to the CBD have taken steps to comply with these commitments. The COP established a subsidiary body – the Ad Hoc Open-ended Inter-sessional Working Group on Article 8(j) and Related Provisions (referred to here as the Article 8(j) Working Group) – to address these issues and to develop an ambitious programme of work, which was adopted by the COP in 2000 and provides the basis for action on traditional knowledge within the framework of the Convention.

The work of the CBD on traditional biodiversity-related knowledge and the Article 8(j) Working Group

The 188 Parties to the CBD are 'conscious of the intrinsic value of biological diversity and of the ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of biological diversity and its components'. Therefore, the interdependent relationship between biological and cultural diversity constitutes an integral part of the work of the Convention.

The CBD contains a number of provisions of particular importance to indigenous peoples. The main provision is Article 8(j) in which Parties undertake to respect, preserve and maintain the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biological diversity. They also undertake to promote the wider application of such knowledge, innovations and practices with the approval and involvement of the indigenous peoples concerned. Article 8(j) also requires that benefits arising from the application of traditional knowledge, innovations and practices should be

shared equitably with the indigenous communities concerned.

The Parties to the CBD have taken steps to comply with these commitments. The COP – the Convention's supreme decision-making body, composed of all the governments that have ratified the convention[1]– established a subsidiary body – the Article 8(j) Working Group – to address these issues and to develop an ambitious programme of work, which was adopted by the COP in 2000 and provides the basis for action on traditional knowledge within the framework of the Convention.[2]

The Working Group was mandated to oversee the implementation of the programme of work, which focuses on the following issues:

* The effective participation and involvement of indigenous and local communities in policy development and decision-making relating to the use of their traditional knowledge and practices relevant to the conservation and sustainable use of biological diversity.
* The development of mechanisms and legislation to foster the effective participation of indigenous and local communities in decision-making policy, policy planning and development and implementation of the conservation and sustainable use of biological diversity at all levels.
* The preparation of a composite report on the status and trends regarding traditional knowledge of indigenous and local communities.
* The development of guidelines on environmental, cultural and social impact assessment for developments proposed to take place on sacred sites and on lands and waters occupied by indigenous and local communities.
* The development of guidelines on the sharing of benefits arising from the utilization of traditional biodiversity-related knowledge and innovations.
* The development of elements of *sui generis* systems for the protection of traditional knowledge.
* In addition, traditional knowledge is an important component of the thematic programmes of work on agricultural biodiversity, forest biological diversity, marine and coastal ecosystems, inland waters, and dry and sub-humid lands established by the COP.

The Article 8(j) Working Group has held three meetings to date, and has made preliminary assessments of the status of traditional knowledge protections and taken steps to involve members of indigenous and local communities in the CBD process. The fourth meeting of the Working Group is scheduled for Granada, Spain, from 23 to 27 March 2006 (see: http://intranet.biodiv.org/meetings/). Below is a brief summary of our ongoing work:

Akwé:Kon Voluntary Guidelines

The COP has been actively considering the question of the preservation of sacred sites and lands and waters occupied by indigenous and local communities. In February 2004, COP 7 adopted guidelines for the conduct of cultural, environmental and social impact assessments regarding developments proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities. These are known as the Akwé:Kon Voluntary Guidelines.

The Akwé:Kon Voluntary Guidelines provide guidance to governments on the incorporation of cultural, environmental and social considerations of indigenous and local communities into new or existing impact assessment procedures. The COP requested governments to use these guidelines whenever developments are proposed to take place on, or are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities.

International regime on access and benefit-sharing and indigenous participation

The Working Group on Access and Benefit Sharing has been mandated to elaborate and negotiate, with the collaboration of the Article 8(j) Working Group, an international regime on access and benefit-sharing to effectively implement the concepts of prior informed consent for access to genetic resources and of arrangement for the fair and equitable sharing of the benefits derived from the utilization of genetic resources.

The results of the deliberations of the Working Group at its meetings in February 2005 and February 2006, will be submitted for consideration by the COP at its eighth meeting, to be held in Brazil in March 2006. Noting the importance of indigenous participation, the CBD has secured funding to ensure an adequate level of participation by indigenous representatives in these meetings, until the established Voluntary Fund is operational after COP 8.

Composite report on the status and trends regarding the knowledge, innovation and practices of indigenous and local communities

The work programme provides for the preparation of a composite report on the status and trends of traditional knowledge. The main objective is to identify the status and trends regarding the retention or loss of traditional knowledge, as well as the causal factors that underpin these trends.

The first phase of the composite report dealing with status and trends (and its regional components Latin America, Asia, Europe, North America and Africa) was submitted to the third meeting of the Article 8(j) Working Group, and subsequently to the seventh meeting of the

COP in February 2004. (These reports are available on the Secretariat website: www.biodiv.org.)

In general the reports acknowledge the loss of traditional knowledge and emphasize the relative scarcity of examples of measures and initiatives specifically designed to protect, promote and facilitate the use of traditional knowledge.

In February 2004, the COP requested that work be initiated immediately on phase II of the composite report, laying emphasis on the identification of national processes and processes at the local community level that could threaten the maintenance, preservation and application of traditional knowledge, innovations and practices, through national focal points and in consultation with the indigenous and local communities.[3] The Secretariat has recruited consultants to prepare phase II of the composite report, and its components, which include regional reports and a review of the usefulness of registries. The composite report will be complemented by a draft programme of action to promote and protect traditional knowledge, which will include possible indicators for traditional knowledge retention. This document will be submitted to the fourth meeting of the Article 8(j) Working Group in January 2006. It is envisaged that the Article 8(j) Working Group will use this submission as a basis for making recommendations for consideration by the eighth Meeting of the COP (March, 2006), regarding the establishment of indicators.

Indigenous and local communities were invited (Notification 2004-049) to undertake field studies and to communicate their views to the Secretariat on the above-mentioned issues not later than 31 May 2005 to ensure that their views are adequately reflected in phase two of the composite report.

The CBD is committed to working with indigenous and local communities, and to contributing to capacity-building for indigenous peoples, with particular attention to indigenous women. Indigenous and local communities are involved in the formulation and review of our studies through consultancies and now also through the Advisory Group/Steering Group that was recently created. This body, in which indigenous and local communities are represented, will assist in the completion of the composite report and undertake a peer review of the revised version, in consultation with indigenous peoples and local community organizations that have participated in the work of the Convention.

Sui generis systems of protection based on customary laws of indigenous peoples

The Article 8(j) Working Group will consider the issue of *sui generis* systems at its meeting in the first quarter of 2006. To prepare for this, the Secretariat is in the initial phase of reviewing relevant material regarding *sui generis* systems and the other topics mentioned above. Indigenous and local communities and relevant organizations were invited (Notification 2004-049) to communicate to the Secretariat any relevant information on existing *sui generis* systems, as well as their views and suggestions on the issues mentioned above no later than 31 May 2005 to ensure they are taken into account in the preparation of documentation regarding *sui generis* systems of protection for the next meeting of the Article 8(j) Working Group.

Workshop on indigenous women, traditional knowledge and the Convention on Biological Diversity, and mainstreaming of gender issues[4]

This request of the UNPFII will be submitted to the Article 8(j) Working Group at its next meeting (January 2006), which is expected to make recommendations to COP 8. However, one of the general principles of the Programme of Work on Article 8(j) and Related Provisions includes the 'Full and effective participation of women of indigenous and local communities in all activities of the programme of work'. Consequently it is important that indigenous women be active participants in developing and implementing the programmes of work and decisions of the CBD.

As part of the work on the composite report, COP-7 requested (decision VI/10C, paragraph 11, reaffirmed in decision VII/16E) that regional workshops be held to ensure the full participation of indigenous and local communities, particularly women, in the preparation of the report on status and trends of traditional knowledge relevant to biological diversity. The Secretariat organized regional workshops in the first half of 2005 for Africa, Asia, and Latin America, Central America and the Caribbean, paying particular attention to the participation of indigenous women.

The Secretariat of the CBD also participated in a training and capacity-building workshop for indigenous women in partnership with the UNPFII, Tebtebba Foundation and the Asia Indigenous Peoples Pact, prior to the third Session of the UNPFII in 2004. Tentative plans are in place to hold other training and capacity-building workshops for indigenous peoples, and specifically for indigenous women, as part of the ongoing programme of work for Article 8(j).

Workshop on Cultural, Environmental and Social Impact assessments based on the Akwé:Kon Voluntary Guidelines aimed at further strengthening the understanding of the link between environment and cultural diversity[5]

At its second session, the UNPFII recommended, *inter alia*:

that United Nations bodies, in particular the Convention on Biological Diversity, in coordination with the World Bank, UNDP, FAO, IFAD and UNEP, organize a workshop on protecting sacred places and ceremonial sites of indigenous peoples with a view to identifying protective mechanism and instituting a legal framework that make cultural, environmental and social impact

assessments studies mandatory and ensure the environmental accountability of economic, social and environmental projects that are proposed on sacred sites and on lands, territories and waters traditionally occupied or used by indigenous peoples.

This workshop was requested by COP-7 (decision VII/16 I) acting upon the request from UNPFII. The workshop was organized in close cooperation with UNESCO, UNU, the World Conservation Union (IUCN), UNPFII and the Secretariat of the CBD. The workshop was held as part of the high-profile public Symposium n Conserving Cultural and Biological Diversity: the Role of Sacred Natural Sites and Cultural Landscapes, held from 30 May to 2 June, an activity of the World Expo 2005 in Aichi, Japan.

Elements for an ethical code of conduct to ensure respect for the cultural and intellectual heritage of indigenous and local communities[6]

Following up on a recommendation of the UNPFII, the COP requested the Article 8(j) Working Group to develop elements of an ethical code of conduct to ensure respect for the cultural heritage of indigenous and local communities for the conservation and sustainable use of biological diversity, taking into account task 16 of the programme of work on Article 8(j) and related provisions.[7]

The Secretariat has already started researching examples of codes of ethics and conduct governing research, as used by such bodies as research institutions, business and indigenous and local communities, and is also working on a draft version of the above-mentioned ethical code of conduct for consideration of the Advisory Group (July, 2005), the Article 8(j) Working Group (January, 2006) and eventually the eighth meeting of the COP (March, 2006).

Furthermore, indigenous and local communities were invited (Notification 2004-049) to communicate to the Executive Secretary relevant information and views regarding the elements for an ethical code of conduct, as outlined above, no later than 31 May 2005 to ensure that is taken into account in the documentation in preparation.

Additionally, when the second phase of the composite report on the status and trends regarding the knowledge, innovations and practices of indigenous and local communities is concluded, it shall include elements for a programme of action, which in turn, will include possible codes of ethics and conduct as strategies to protect and promote traditional knowledge. The CBD has a Memorandum of Understanding with the World Intellectual Property Organization (WIPO) whose objective is to enhance cooperation between our organizations on intellectual property issues concerning access to genetic resources and benefit-sharing, and the protection of the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity.

Participation in the CBD process

In Decision VII/16/G, Participatory mechanisms for indigenous and local communities, Seventh Conference of Parties:

Decides to establish a voluntary funding mechanism under the Convention to facilitate the participation of indigenous and local communities, giving special priority to those from developing countries and countries with economies in transition and small island developing States in meetings under the Convention, including meetings of the indigenous and local community liaison group and relevant meetings of ad hoc technical expert groups. The funding mechanism for the participation of indigenous and local communities established herein shall operate according to criteria to be developed by the Conference of the Parties in consultation with indigenous and local communities and taking into account any United Nations practice in this field.

The voluntary fund is expected to be fully operational by mid-2006. Until that time, the Secretariat, noting the importance of indigenous participation in CBD processes and in particular in the Article 8(j) Working Group and the Working Group on Access and Benefit Sharing (see www.biodiv.org/meetings/), which will occur in early 2006, has secured funding to ensure an adequate level of participation by indigenous representatives in these meetings, until the established Voluntary Fund is fully operational after COP 8.

To further encourage participation in CBD meetings,the CBD has an established notification process. Notification(s) regarding these meetings will be available at www.biodiv.org/doc/notifications/default.asp. Once the notifications are posted on the CBD website indigenous and local community organizations may request funding, as needed.

Also, indigenous and local community representatives can subscribe their organization/s in order to be informed as soon as notifications are issued. If you wish to do so, please complete the subscription form, which is available at www.biodiv.org/user/subscriptions.aspx/.

In conclusion

Over the past decade, traditional knowledge has gained growing interest from the international community. Within their respective mandates, more than eleven UN agencies are engaging with the issue of traditional knowledge (including CBD/the UN Environment Programme (UNEP), WIPO, the United Nations Conference on Trade and Development

(UNTCAD), UNPFII, FAO, the International Fund for Agricultural Development (IFAD), UNESCO, the Office of the United Nations High Commissioner for Human Rights (OHCHR)/Working Group on Indigenous Populations (WGIP), the UN Forum on Forests/Department of Economic and Social Affairs (DESA), the UN Development Programme (UNDP), Global Environment Facility (GEF), UN Framework Convention on Climate Change (UNFCCC) and the World Health Organization (WHO)). It is clear that there is much more to do to ensure that the protection and promotion of traditional knowledge is adequately and holistically addressed, and this is reflected in the vast amount of activity throughout the international system on this issue.

The CBD has considerably advanced our preliminary work of the promotion and protection of traditional knowledge. In distilling our work into outcomes, we are seeking and encouraging the active involvement of indigenous and local communities in the work programme of Article 8(j) and related provisions. Please familiarize yourself with our webpage and the notification process, so that you can follow and actively participate in our work.

Annex I

Names and contact information for the focal point on indigenous issues in the CBD.

Mr John Scott
Programme Officer, Traditional Knowledge
Tel: (+1) 514 287 7042
Email: john.scott@biodiv.org

Ms Sofia Gutierrez
Programme Assistant, Traditional Knowledge
Tel: (+1) 514 287 7048
Email: sofia.gutierrez@biodiv.org

The CBD List of Conferences and other meetings regarding indigenous issues in 2005 and 2006 can be found at www.biodiv.org/meetings/

CBD Notification regarding upcoming events and funding opportunities: www.biodiv.org/notifications.aspx?page=ntf

Notifications

Issued by the Secretariat of the Convention on Biological Diversity, notifications serve to inform Parties, stakeholders and the interested public of activities, meetings and events undertaken or requested by the Secretariat. They are the single best source of information on activities pertaining to and in support of implementation of the Convention. If you wish to be informed when new notifications are issued, please complete the subscription form which is available through: www.biodiv.org/user/subscriptions.aspx

Notes

1. There have been seven COP meetings to date. The last COP meeting (Seventh Ordinary Meeting of the Conference of the Parties to the CBD) was held in Kuala Lumpur, Malaysia, from 9 to 20 February 2004. The next meeting of the COP will take place in Brazil (8 to 19 May 2006).
2. The Programme of Work on Article 8(j) and related provisions is contained in the Annex to decision V/16. Decisions VI/10 and VII/16 further develop the work programme. All are available at www.biodiv.org/decisions/
3. See Decision VII/16 E, Working Group on Article 8(j) and Related Provisions. Available at www.biodiv.org/decisions/
4. Recommendation 1, Indigenous Women, paragraph 11 and Recommendation 6, Environment, paragraph 75 (PFII Report on the Third Session, 10 to 21 May 2004).
5. Recommendation 8, Environmental Impact Assessment and Cultural Diversity, paragraphs 55 and 56, Report of the Second Session of the Permanent Forum on Indigenous Issues (E/2003/43-E.c19/2003/22).
6. Recommendation 3, Culture, paragraphs 37 and 38 (E/2004/43 Report on the Third Session UNPFII).
7. See Decision VII/16 I, Working Group on Article 8(j) and Related Provisions. Available at www.biodiv.org/decisions/

Protection of sacred sites: global framework and local actions. Lessons from Lake Baikal and the Altai Mountains of the Russian Federation

Erjen C. Khamaganova, USA

Summary

The paper analyses two approaches to the protection of sacred sites by indigenous peoples of the Russian Federation, with the examples of Lake Baikal and Altai Mountains, which are UNESCO World Heritage Sites. Lake Baikal was inscribed on the UNESCO World Heritage List in 1996 and the Golden Mountains of Altai in 1999. It highlights the meaning of sacred sites in the culture of the Buryat people, one of the indigenous groups of the Russian Federation. It also analyses the implications for local communities of the Convention on Biological Diversity (CBD) with respect to *Akwe:Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment Regarding Developments Proposed to Take Place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities (2004).*

Fig. 1 Altan-Erdeni, spiritual leader of nine Buryat clans, conducts a ceremony of honouring the sacred Lake Baikal

Introduction

Indigenous peoples in multi-ethnic Russia, though diverse, share one common feature: their special attachment to their land. Indigenous sacred sites in these terms become a cornerstone of native philosophies; they represent profound connections with nature as a place of interaction between the material and spiritual realms and among all lifeforms.

The modern reality in the Russian Federation concerning protection of sacred sites is full of controversy, hopes and pessimism. On the federal level, a comprehensive legal framework and programmes for the protection of sacred sites have yet to be developed. On the local and provincial levels there are various attempts to address this problem. Some of them have proven to be successful though some of them have not. Unfortunately there are many more stories of struggle and failure than success stories.

The paper aims to reveal lessons learnt in the protection of two unique territories of the Russian Federation, both of which are recognized as UNESCO World Heritage Sites: the Golden Mountains of Altai and Lake Baikal. The Altai Mountains are home to the Altai people, Kumandins,

Tubalars, Telengits, Shors and Chelkans. Lake Baikal is home to the Buryats, Evenkis, Soyots and Tofalars.

As a Buryat of the Khongodor and Tsagaantan clans from Lake Baikal, I would like to share with you the meaning behind 'sacred sites' to Buryat people, which in many ways is similar to the understanding of other indigenous peoples of the Lake Baikal region and of native Altaians.

First, a note on language. In Buryat language the term 'sacred' – *ariun* – literally means 'pure'. The word for 'sacred' as an attribute of a place is *hatuu gazar*, meaning place of power, or murgeltei gazar – a place of worship.

Sacred sites have a multilayer character in Buryat life. The following aspects represent some part of the profound, complex and dynamic interactions of Buryats with their own sacred sites and the sacred sites of other peoples.

Sacred sites ensure a spiritual continuity of successive generations of a nation, and they are a significant factor in the continuous formation of the native way of thinking and native mentality. A sacred site is an area of centuries-old native individuals deep spiritual work to maintain the richness of the site's biological diversity. Today, for example, the Altai Mountains represent a high degree of concentration of rare species that are unique to the mountain ecosystems. Lake Baikal, the oldest and deepest lake in the world, is home to more than 3,000 species of animals and plants, almost half of which are endemic to the area. Buryat clans connect their origin directly with Lake Baikal and trace their lineage to natural forefathers, the animals and trees of the lake. This high degree of diversity of lifeforms on sacred sites could be explained by the fact that sacred sites are the places of origin of certain families or clans, and have been protected because many of these forms were believed to be our ancestors.

Importance of sacred sites

To native peoples, a sacred site is both an arena and an actor in traditional education and upbringing processes. There are many taboos that ensure correct behaviour in these places of power. Entering a sacred place, those who are properly educated and who behave accordingly, find themselves under the patronage of the spiritual owners of the place. People who are constantly under pressure from everyday routine, upon entering the zone of sacred places, finally get an opportunity to simply be themselves. The feeling of finding refuge and protection has a tremendously favourable effect on the human mind and soul. From the time they are aware of themselves and their environment, children have to start memorizing taboos connected with special places, actions and words. The memorization of the location of sacred places requires a deep attention to the environment and to the distinguishing features of the landscape along with plant composition, which will ultimately be conducive to a respect towards lifeforms in their great diversity. Knowing that people can find protection and rest in the zone of sacred places, a child is imbued with the profound respect toward those places. The taboos connected with the sacred places serve to mark native lands, and designate them in the emotional memory. These associations form a spiritual voicing of the special places in the environment.

Sacred sites are not to be approached as mere conservation mechanisms for a particular ecosystem. Originally they were an active space of interconnected events, including family and clan ceremonies, rituals and offerings. The presence and active perception of the place as a holistic unity of all living species, spirits and the material world helped people to realize the simple truth that we all are connected, that the well-being of a site depends on the proper conduct of people and vice versa.

Fig. 2 Celebration in Uch-Enmek [left]

Fig. 3 Sacred sites as zones of peace and non-violence [right]

In light of all these meanings, the following became an acute problem in the modern Buryat life. The destruction of Buryat native identity eventually led to the destruction of many sacred sites, and the destruction of sacred sites in turn contributed to the further destruction of Buryat identity. Many other native peoples of the Russian Federation were also facing this problem. In 2000, some of us joined to form a network of indigenous non-governmental organizations (NGOs) called Light of the Ancient Lands, which united eleven various activist groups of indigenous peoples in the enormous territory of Siberia and the Russian Far East. The protection of sacred sites was identified as a priority. Our first activities included a series of seminars and discussions on the sacred sites issue. We met in areas of Baikal and Altai that have been sacred sites for thousands of years, and still are. The significance of them transcends the boundary of clan/tribal affiliation and they have become truly globally significant.

We saw two possible ways to approach the protection of sacred sites: one through the development of regional legislatures and the second through the creation of a specific form of specially protected territories within the framework of existing regulatory schemes. We applied the first approach to the situation in the Ust-Ordynsky Buryat Autonomous Okrug (region). Altai activists implemented the second approach in the Republic of Altai through the creation of unique protected areas under the provisions of the 'special protected territories' law of their republic.

The very first issue that struck us as the major problem was the reality that forced us to abandon the term 'sacred sites' in the process of developing legal documents in both cases. A definition of 'sacred sites' does not exist in the modern legal jargon of both the Russian law system and international conventions. And yet efforts were required in order to develop and accept a straightforward definition. However, we were not persuasive enough. In the first case, the compromise term was 'places of special historic-cultural significance', and in the second case, the term was masked under the definition 'ethno-natural park'. It would be worthwhile to concentrate more on the drafting of the law. Unfortunately we were not successful, and I shall try to demonstrate why, and to extract a lesson from our experience.

The draft of the law successfully passed the first reading in the local legislature, Okrug's Duma. Experts on the national level of the State Duma in Moscow gave it a positive evaluation, and two committees of the State Duma (on international and interregional relations, and the committee on land use) have also supported this draft; but it was never implemented. In retrospect, I can now see that our failure at that time was not only connected to the fact that we are a minority within the administrative unit bearing the name of our nation, Buryat Autonomous Region. The failure had to do with flaws in our design and with the fact that the objective conditions for the adoption of such a law were not present at that time. Today, the Okrug, in light of recent plans for enveloping major development projects, desperately needs a special legal mechanism for the protection of sacred sites, but we can no longer suggest and promote a previously developed draft for several reasons.

First of all, following the compromise (which we first thought was a good solution) resulted in a discontinuity between the jargon and the true meaning of the phenomenon. Secondly, based on the existing system of sacred sites in Buryat culture (that is, family sites, clan sites and tribal sites), all Buryat sites were designated based on a multiple system: sites on the federal, state and local level. This implied that they had a varying degree of importance and therefore deserved varying levels of protection, which is completely unacceptable. It is obvious that a native person would never rank the sacred sites on a scale of greater or lesser importance. Attitudes to, and respect for, all the sites were always equally high. Light of the Ancient Lands did not rank the sites either, but in the process of 'translation' into the modern legal context, the true meaning was lost. These were the most important 'native' considerations that we compromised in our design. But there were also the 'objective' difficulties such as ambiguity of ownership rights and issues of a proper system o management and maintenance.

Ownership rights and management systems ar probably the most acute issues that indigenous people ar facing today. The system of management that we proposed was based on local communities. In our understanding, a community is a unity of people with shared understanding of their rights and obligations, a unity of people who have developed their own institutions of self-organization, as opposed to a village, which can be a purely administrative or geographic unit. But in the draft of the law 'community' was understood as a village or settlement. Today communities in these terms are usually very heterogeneous, and the interests of the actors often diverge. The traditional unit of 'maintenance' – a family, as I already mentioned; many places are sites of the birth of a family – is not a sufficiently legitimate entity in modern legal terms for officials to hand over issues of management to families. Moreover, in modern circumstances many families live detached from their family sacred sites so they do not have the opportunity to maintain constant ties with these places and 'manage' them. The deepening gap between traditional family sacred sites and modern family life is seemingly shallow, but it very deeply divides and destroys native societies which are traditionally based on family and family relations.

As for the Altai situation, the approach to protect sacred sites through the creation of ethno-natural parks was a more successful and promising effort. The unique

Karakol valley is now protected as the Uch-Enmek ethno-natural park. The place is considered by the native peoples of Altai as the navel of the earth. One more promising project is the creation of an ethno-economic park, Choi-Ozy, which was initiated first of all with the idea of preserving traditional lifestyles and traditional economic activities, but inevitably led to the protection of the sacred sites on its territory. Such an approach deserves further replication in other parts of the Russian Federation. However, the recent development of nationality policy excludes the immediate spread of these positive models. Moreover, there are attempts to argue that these unique protected territories are no longer legitimate within the context of land reforms, which does not leave any space for such forms of self-organization.

There was one more aspect of our work on the sacred sites of the Lake Baikal watershed. Taking into consideration the importance of Baikal's tributaries for the ecological integrity of the lake and its biodiversity, we recognized the threats and pollution coming from the major urban centre of the Baikal basin, and decided to approach the issue of ecological consciousness through the concept of the sacred site, its cultural dimension. Our efforts to address this important issue have been a partial success. We organized the Ulan-Ude City Council on Historic-Cultural Sites of Special Significance. Representatives of all religious and ethnic backgrounds that had established organizations in the Republic of Buryatia were invited to participate in the process. The overall objective was to strive to delineate special areas of the territory of the city that had particular spiritual significance for the city dwellers.

Initially not everyone understood what our work really consisted of: representatives of the Russian Orthodox Church, Russian Old-Believer's Church and Catholics all said that the only sacred places they had and cared about were their church buildings. But further work eventually led to better understanding. It emerged that indeed on the territory of our capital city there were, and still are, special places that are significant for the representatives of those cultures. For example, for the Russian Orthodox Church, the area where Saint Nicholas, the last Russian Emperor, stayed, is sacred; for Catholics, the place of mass execution of Polish rebels, many of whom were devout Catholics, has a special meaning, and so on. As for indigenous Buryats, the urban Buryats recognized two sacred sites. One was a shamanist one, right in the centre of the city, where the protective spirit of the city lives, and another was a sacred site for Buddhist Buryats.

There were two distinct important lessons that we learnt from these efforts. First of all, it was very important for the indigenous urban Buryats, who did not have much

Fig. 4 The Golden Mountains of Altai [above]

Fig. 5 Lake Baikal [right]

chance to go back to their place of birth to conduct regular ceremonies, to receive an opportunity not only to still be connected to the tradition, but also to revive their ties to mother nature. Secondly, we were able to transmit the deeper meaning of the sacred sites in Buryat culture to other incoming cultures on the profound basis of peace, non-violence and respect for the expression of others, who for better or for worse are living now with us in our native lands, including the sacred sites that are indispensable for our identity, and who exceed us in numbers and influence.

The main conclusion to be drawn from these efforts is that a distinctive understanding of sacred places and their significance in native cultures can be extrapolated to other cultures. These cultures, which for a very long time had not recognized either the importance or the vitality of indigenous traditions, became able to review their approach and incorporate some important features of indigenous understanding into to their own modern reality. This was further proof of the living, dynamic and powerful manifestation of indigenous traditions, which are not covered under museum dust or lacquered with gold leaf. The work with sacred sites became the basis for dialogue: it formed the basis for peaceful and non-violent resolution of conflicts. It is also worth underlining that the attention of other cultures to the native Buryat tradition is conditioned by their understanding of an unfolding crisis: the alienation of humanity and nature, the failure of the dominant doctrine of the mastery of people over creation. In these terms we, native people, can offer a lot to deepen this understanding, and our work on the protection of sacred sites must become missionary work, if you wish: a form of work that is very familiar to indigenous peoples all over the world, and that brought so much destruction to our native ways. And yet our mission is not to force others to accept our values, but to demonstrate alternatives. As a Buryat saying states, *uhaantai hun oilogoho*: the wise one will understand. In light of this, proactive efforts are urgently needed.

Today indigenous peoples are recognized by international organizations; today we indigenous peoples from all continents are able to jointly discuss our urgent issues, so there exist the necessary conditions for more proactive efforts. We do not always have to maintain 'defending' positions, constantly proving things to be true and absolute as basically they do not require any proof. We need to be more persistent in conveying our message to the world, and to people around us. Our cultures are not archives or museum objects; we are not archaic survivals (like the mammoth that is the main feature at the World Expo in Aichi). Our cultures are developing and changing.

In today's reality, in our World Heritage Sites – Lake Baikal and the Golden Mountains of Altai – the existing ecological nihilism of the incoming population is 'balanced' in many ways only by native traditions and the efforts of

the indigenous population to protect their sacred sites. Indeed the native people are doing constant work everyday to ensure the continuity of their own sacred sites and thus contributing to the conservation of biodiversity and ultimately ensuring the future existence of the World Heritage Sites.

Akwe:Kon Voluntary Guidelines

The Akwe:Kon Voluntary Guidelines, as a global framework for protection of sacred sites and their biodiversity, provide local and native communities with very useful tools. The voluntary guidelines are based on a holistic approach and they provide a much-needed participatory system ensuring the collaboration of indigenous and local communities in assessment of the cultural, spiritual, environmental and social impacts of proposed development. It is significant that the guidelines also entail the assessment of the positive impacts of development projects on local communities.

The issue now is how to fruitfully coordinate local actions with subnational, national and global actors vertically, as well as how to strengthen horizontal cooperation. First of all, more active efforts must be put to convince national authorities of the benefits of implementing the Akwe:Kon Guidelines in our country. But how many local and indigenous communities are actually aware of this existing framework? Those who have access to this document, which has been published in the Russian language[1] may not relate their work on the protection of sacred sites to these guidelines because of an inadequate translation of the title of the document. Instead of 'sacred sites' a term which can be translated as 'places where sacred objects are located' is used. But our sacred sites are

holy in themselves. It is a minor shift in translation but the shift might have substantial impact. If the title itself excludes straightforward definition of the matter of our concern, it also excludes individuals and communities who potentially would relate to the opportunities provided by the Akwe:Kon Guidelines.

Akwe:Kon foresees possibilities for adaptation, and for considering the real conditions of an affected community and the scope of proposed development. On the ground we – indigenous communities – need to develop effective mechanisms for our active participation in the implementation of the guidelines. The overarching principles of the Akwe:Kon Guidelines will be realized in different communities by different means and with different emphasis. For our organization, the whole meaning of collaboration with developers and official authorities in assessment processes will be based on the close understanding of Article 49, for we see this article as the philosophical cornerstone of all the issues connected with the protection of sacred sites. The article addresses generational considerations, and clearly states the need to assess 'the impacts that may potentially interfere with opportunities for elders to pass on their knowledge to youth, or which might render certain skills and traditional knowledge, innovations and practices redundant'.

In implementation of the guidelines one must be careful with the interpretation of Articles 25 and 26. There is a potential threat in interpreting this provision on the basis of setting a scale from important to not important, much like the mistake we made in drafting the regional law. The article can be read as the promotion of values of local, national and international nature, regardless of scale, or it can be read as highlighting a need for ranking. The implementation of the provisions of Article 31, stating that 'personnel associated with such developments should recognize that many sacred sites… may have important functions with respect to the conservation and sustainable use of biological diversity and… the maintenance of the natural resources upon which such communities rely for their well-being' on the local level must entail an active involvement of elders and spiritual leaders in providing appropriate 'training' of such personnel.

In Article 34, which addresses 'the possible impacts on the customary law of an affected community', we should not disregard the underlying philosophy of customary law, which is based on non-violent conflict resolution. Therefore we need to extend the article with a statement of the need to discuss the options for the traditional peacemaking institutions of a local community.

Finally, Article 68 concerning the issues of information exchange must include more proactive reference to the traditional means used by medicine people, shamans and elders of knowledge acquisition and dissemination, which might help to raise public awareness. A separate article regarding traditional means of communication and proper procedures for their use could even be included under the section 'information exchange', which could tie together Article 49 on continuity of indigenous knowledge and generational consideration with the issues of information exchange, enabling the quality participation of a greater number of indigenous people in these processes.

Successful implementation on the basis of the Akwe:Kon Voluntary Guidelines with participation of local communities will, without a doubt, contribute to the goal of prevention of adverse development impacts on sacred sites, the livelihoods of local communities, and biodiversity. But this successful implementation depends on the active position of local and indigenous communities.

Many things are changing rapidly and are being created anew in our modern dynamic world but our sacred sites must remain sacred, ensuring continuity of the harmony between people and nature, linking the past of our ancestors with today's reality of our families and with the future of our children.

Acknowledgements

Photo credits: Vladimir Chenkirov 'Ceremony in honour of Lake Baikal', and Matt Fole, 'Altai Mountains', were originally published in *Honoring Ancestors* (1994), Buryatia, Ulan-Ude, Soyol Publishers. They are reproduced by kind permission of the publishers.

Note

1. Thanks to the Russian Association of Indigenous Peoples of the North, the text of Akwe:Kon has been published as a supplement to the RAIPON periodical *Zhivaja Arktika*.

Reference and further reading

Secretariat of the Convention on Biological Diversity. 2004. Akwé:Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment regarding Developments Proposed to Take Place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities. *CBD Guidelines Series.* Montreal, CBD.

Additional contributions

Protecting sacred natural sites of indigenous and traditional peoples

Gonzalo Oviedo and Sally Jeanrenaud, World Conservation Union (IUCN), Switzerland

Summary

Ideas of the spiritual and sacred are not new within conservation paradigms. Early conservationists were often inspired and awed by what they termed 'the wisdom of wilderness', and 'the infinite capacity of nature to uplift the human spirit'. Such values were frequently invoked and appealed to in the early protected areas movement. However, although early conservation efforts were undertaken 'for the benefit of all humanity', as part of the 'universal human heritage', the sacred natural sites were either overlooked, or alienated from their traditional owners, as they were assimilated into official protected areas.

The rekindling of interest in the spiritual within conservation paradigms does not preclude scientific knowledge or approaches. Nature is, of course, 'a system' that can be studied, understood and protected. It is also 'a set of resources' which are to be sustainably and equitably managed. But, it can be contemplated in other ways which may be more significant to people. It is a mystery, beyond the bounds of contemporary science, which engenders awe; a source of pleasure to be enjoyed; a creative power to be praised – and more. Nature's many dimensions provide opportunities to engage with people in other meaningful ways.

The World Conservation Union (IUCN) has been working for some time for the protection of sacred natural sites, through its Secretariat offices and its Task Force on Cultural and Spiritual Values of Protected Areas of the World Commission on Protected Areas (WCPA), and involving a wide range of partners, globally and nationally: government agencies, indigenous and community organizations, inter-governmental bodies, and others.

Sacred natural sites (SNS) are natural areas of special spiritual significance to peoples and communities. They include natural areas recognized as sacred by indigenous and traditional peoples, as well as natural areas recognized by institutionalized religions or faiths as places for worship and remembrance.

Many sacred sites have survived for hundreds of years and act as important biodiversity reservoirs. However, their contribution to conservation has been largely overlooked and undervalued by state and conservation agencies, policies and laws, and currently many such sites face difficult threats which might not be overcome by the efforts of their traditional owners and managers alone. A concerted international effort is needed to support effective protection of the SNS of the world.

The growing appreciation of the contribution of SNS to environmental protection has prompted renewed interest in them as tools for biocultural conservation. IUCN's Fifth World Congress on Protected Areas (Durban, September 2003) paid great attention to the issue and produced relevant outputs and recommendations, which were reaffirmed at the Third IUCN World Conservation Congress (Bangkok, November 2004). These have been followed by several field and policy actions: two of them are the Project for Conservation of Biodiversity Rich Sacred Natural Sites of Indigenous and Traditional Peoples, and the Delos Initiative for the Protection of Sacred Natural Sites in Developed Countries (described in a separate article in this publication).

IUCN and sacred sites

IUCN (the World Conservation Union) was founded in 1948 and brings together more than 1,000 member and affiliate institutions – states, government agencies and civil society organizations – as well as more than 10,000 scientists and experts from all over the world. Its mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

IUCN has been working for some time for the protection of SNS. Its interest in the subject emerged in the context of highlighting nonmaterial values of protected areas; this work led to the realization that many sacred sites had been

integrated in formally declared protected areas, due to their biodiversity, ecosystem and aesthetic values, and that such integration, however, had often happened at the expense of the interests of the living cultures linked to the sites, and of the rights and interests of the traditional site owners and users. At the same time, IUCN was involved in many field activities that supported the conservation of specific sacred sites.

Following the UNESCO International Symposium on Natural Sacred Sites (UNESCO, 1998), where IUCN and the Worldwide Fund for Nature (WWF) among others were represented, these organizations started discussing options to develop collaborative work for the protection of SNS, building on their field experience, IUCN's work on the cultural and spiritual values of protected areas, and WWF's experience in working with major faiths. Both organizations agreed that a new policy approach and a more systematic action were required. The process that followed is described later in this paper.

IUCN's work on sacred sites is done from its Secretariat offices in several regions and its WCPA through its Task Force on Cultural and Spiritual Values of Protected Areas (CSVPA). IUCN works with a range of partners and members, globally and nationally: government agencies, indigenous and community organizations, faith-based groups, inter-governmental bodies and others.

What is a sacred natural site?[1]

Sacred sites may be defined as areas of special spiritual significance to peoples and communities. They may include primarily natural areas (such as forests or rivers), or primarily built or monumental areas (such as temples). IUCN focuses on areas that are primarily natural, as they link to its mission, but generally supports the cause of conserving both monumental and natural sacred sites as valuable elements of human cultures.

For the purposes of this paper and of IUCN's work, sacred natural sites (SNS) may be defined as areas of land or water having special spiritual significance to peoples and communities. Many such SNS are areas of great importance for the conservation of biodiversity. In fact, very often the reasons for protecting the spiritual connections between people and the earth, and for conserving biodiversity in their lands, are inseparable (Oviedo, 2001).

Generally, two types of sacred natural sites can be found in the world: those established by indigenous and

Fig. 1 House of spirits: Mijikenda elders at Chizia Cha Nyere, sacred spot where ceremonies start in the Kaya forests, Kenya. IIUCN and WWF are involved in conservation of sacred forests in Kenya.

© WWF-Canon / Elizabeth Obel-Lawson

traditional peoples in the context of their spiritual beliefs and customary institutions, and those created by institutionalized religions or faiths.[2]

The sacramental relationship with nature

As a result of spiritual beliefs, many traditional communities throughout the world have given a special status to natural sites such as mountains, rivers, lakes, caves, forest groves, coastal waters and entire islands. Many of these have been set aside as sacred places. The reasons for their sacredness are diverse. They may be perceived as abodes of deities and ancestral spirits; as sources of healing water and plants; places of contact with the spiritual, or communication with the 'more than human' reality; and sites of revelation and transformation. They are sometimes temple sites, the burial grounds of ancestors, places of pilgrimage, or sites associated with special events. Particular plant and animal species may also be considered as sacred by some communities. While many of the SNS have historical significance, they are not static in time or space; new sites can be created in response to changing circumstances and environment.

Access to SNS is often taboo and restricted to a small circle of people, such as priests or pilgrims (Schaaf, 1999). In Maharashtra in India, customs relating to the management of sacred groves are set down by priests with knowledge of forest deities and their influence on life. Ancient folklore and stories are told which include details on the supernatural penalties that will result if the groves are desecrated (Bharucha, 1999). In some cases sacred sites provide a range of products used in rituals by traditional priests or shamans, or in healing, such as the medicinal plants used in the Indian Ayurvedic medical system. In other areas, the harvesting of plants or the hunting of animals is not permitted in consecrated places. As a consequence of their taboo status and access restrictions, many sacred places have served as important reservoirs of biological diversity, preserving unique and/or rare plants and animal species. SNS such as forest groves, mountains and rivers are often visible in the landscape as vegetation-rich ecosystems, contrasting dramatically with adjoining non-sacred, degraded environments. In the Western Ghats (mountains) of India, sacred groves are the only remaining patches of greenery over vast stretches of otherwise devastated countryside (Hamilton, 1998).

Many sacred sites are thus of great value for ecological research and nature protection. In some areas SNS are valuable genetic reservoirs (Schaaf, 1999), and they can be useful indicator sites, which are helpful in assessing the potential natural vegetation of degraded ecosystems. They are also useful sources of genetic material that can be used for rehabilitating degraded environments (Malhotra, 1998). For example, sacred sites in the savannah of Ghana have been used for reviving restoring degraded ecosystems. Afforestation schemes that included the establishment of fodder banks for livestock and the planting of cash crops on the periphery of sacred groves have also helped to enlarge the sacred groves through an additional buffer zone around the holy site (UNESCO, 1998). In other areas, sacred sites may play a role in safeguarding critical sites in watersheds, or helping to preserve the ecological integrity of entire landscapes (UNESCO, 2000).

SNS vary in size, biodiversity value and tenurial status. In some cases, sacred sites are very small areas found on private land. For example, sacred groves in Uganda are very small forests mainly found on private land tenure. In other cases, traditional peoples view whole landscapes as sacred, and it is difficult to identify self-contained sites. Taken alone, the significance of smaller sites may be quite limited for biodiversity conservation, but taken together they can represent sizeable protected areas. For example, some researchers think there might be between 100,000 and 150,000 sacred groves throughout India.[3]

Although many SNS contribute to the conservation of biodiversity, it would be false to assume that complex cultural and social traditions are the same as conservation objectives in environmental agendas determined by outside interests (Agrawal, 1995). In the case of SNS, any conservation effect is probably best seen as one of many effects, or even a side-effect, of social and spiritual traditions. Traditional peoples are usually attempting to benefit from the protection and goodwill afforded by the deity in return for not disturbing the sanctity of the sacred area, rather than explicitly managing resources for conservation goals (Laird, 1999; see also Richards, 1999).

Ideas of the spiritual and sacred are not new within conservation paradigms. Early conservationists were often inspired and awed by what they termed 'the wisdom of wilderness', and 'the infinite capacity of nature to uplift the human spirit'. Such values were frequently invoked and appealed to in the early protected areas movement. However, although early conservation efforts were undertaken 'for the benefit of all humanity', as part of the 'universal human heritage', the SNS were either overlooked, or alienated from their traditional owners, as they were assimilated into official protected areas.

The rekindling of interest in the spiritual within conservation paradigms does not preclude scientific knowledge or approaches. Nature is, of course, 'a system' that can be studied, understood and protected. It is also 'a set of resources' which are to be sustainably and equitably managed. But it can be contemplated in other ways which may be more significant to people. It is a mystery, beyond the bounds of contemporary science, which engenders awe; a source of pleasure to be enjoyed; a creative power to be praised – and more. Nature's many dimensions provide opportunities to engage with people in other meaningful ways.

SNS of indigenous and traditional peoples and SNS of institutionalized religions

The relationship between the SNS of indigenous and traditional peoples and the world's major faiths has in some cases a complex and troublesome history. Many traditional SNS have been appropriated or destroyed because they were considered pagan or idolatrous by newly emerging world faiths. In some instances religious buildings were forcefully superimposed on traditional sites. While it is important to guard against 'demonizing' the involvement of major faiths with indigenous and traditional peoples, it is important to acknowledge that the erosion of SNS can be directly related to the expansion of the dominant faiths in many cases.

On the other hand, it is also important to recognize that some institutionalized religions, on their own and in collaboration with others, have established areas important for biodiversity conservation and have initiated or subscribed to a variety of conservation programmes.[4]

There are a number of important differences between the SNS of indigenous and traditional peoples and the sacred sites of institutionalized religions. These include the following.

Age of sites

Many indigenous and traditional peoples' SNS may have their origins in Palaeolithic times, whereas most sacred sites of institutionalized religions are a more modern phenomenon, many of them having been established only within the last few centuries, in connection with the expansion of Christianity and other major faiths.

Relationship with nature

Indigenous SNS are often associated with a belief in the inherent sacredness of nature, whereas the sacred sites of the world faiths often bestow their own particular symbols upon nature.

Property relationships

In general, indigenous and traditional peoples cannot be said to 'own' SNS. Rather, sites are valued and guarded by people through traditional beliefs and practices. World religions, on the other hand, often own sacred sites in terms of legal property institutions.

Links to the landscape

Many traditional SNS are considered part of broader sacred landscapes, and have intimate connections with all-encompassing concepts such as Mother Earth and nature's sacredness. Sacred sites of institutional religions do not recognize such landscape or cosmological dimensions and links.

The SNS of indigenous and traditional peoples have certain common features throughout the world, while the exact nature of these features varies within and between communities:

- sense of sacredness associated with place
- an identifiable spiritual authority in charge
- limited access and restricted use especially for common people
- contributions to livelihoods
- relatively undisturbed nature
- variable size
- variable tenure
- high degree of acceptance and respect from communities
- threatened status in many cases
- search for appropriate protection.

SNS are important for the vitality and survival of the cultures that created them. There is an indissoluble link between the protection of sacred sites and the right of peoples, communities and cultures to continue to manage and control the places that connect them to their spirituality and cultural expression (Oviedo, 2001).

The spiritual connections between indigenous peoples and the earth are more than a reflection of traditional views on nature; they are also integral parts of ethnocultural identity. In virtually every society, nature provides powerful symbols used to create strong links between the social and the natural. To the people of Orissa in India, the sacred grove is more than a mini nature reserve. It is the keystone in a way of life. It is both locus and sign of the regeneration of body, land, community. It stands for the integration of the human community in nature (Apffel Marglin and Mishra, 1993). To the Hopi people, natural springs are seen as the 'soul' of their people, representing their very identity (Whiteley and Mazayesva, 1999). SNS are often focal points for social and cultural celebrations and religious rituals, establishing social cohesion and solidarity within communities. In many indigenous and traditional communities it is difficult to separate out cultural identity, kin and social relations, livelihoods, and traditional environmental knowledge from the ritualistic use of the land and protection of biodiversity. They are all strongly interdependent.

It would be misleading to assume a complete ban on using resources from SNS. Many sacred places provide useful products for livelihoods. In Madagascar, many communities have depended almost exclusively on sacred forests in times of drought (WWF, 2001). Respect for the spirit in nature does not always mean that communities take a no-touch approach to animals. In many cases, it is recognized that it is the nature of things for one organism to feed upon another, creating relations of indebtedness in the process. For instance, in Japan a whale that has been killed is regarded as having given itself up to humanity so

that we can live, and in return, the whalers become indebted to the whale. Thus whaling activities become intimately bound up with religious beliefs, and as a gift the prey has to be utilized to the fullest. To do otherwise would be an insult to the animal and the creator (Kalland, 1999). Resource use often depends on the degree of 'sacredness' of the site or species, as well as the perceived power of particular deities (Falconer, 1999).

In SNS, spiritual values of the communities are the foundations of their commitment to protect their natural heritage and of their motivation to actively engage in the conservation of such sites. Further, there is an emergence of the 'spiritual' as a new motive force within wider debates about sustainability, and a growing appreciation of the need to re-engage with the sacred within international conservation efforts. This was reinforced at the Fifth World Congress on Protected Areas in Durban, September 2003 and the Third World Conservation Congress in Bangkok, November 2004, and has recently been the motive of many discussions and initiatives within the conservation community at global, regional and national levels.

Threats to natural sacred sites

Many SNS enjoy no legal protection and are faced with threats, broadly related to the impact of modernization and globalization. These include agricultural expansion; demographic changes; erosion of traditional values, particularly associated with the widespread diffusion of institutionalized religions brought in by colonization processes, and which considered traditional beliefs as 'superstitious'; modern land reform programmes which have liquidated traditional land ownership; the expansion of the petroleum and mining industries; tourist development; changing social and economic aspirations of communities; immigration patterns, administrative and policy changes – particularly within last twenty years. Many traditional beliefs and practices that acted as effective controls in protecting the environment are now being overwhelmed by these changes.

To date, SNS have not been formally reflected in protected area designations and management plans, and existing policy and legal frameworks do not adequately support the SNS of indigenous and traditional peoples. In cases where sacred sites have been included in official protected areas, they usually do not remain under traditional ownership and management, which creates conflicts between protected area agencies and indigenous and traditional peoples, thus limiting the effectiveness and the survival of these sites. There are also questions of how to manage SNS on public land ceded by treaty. Several countries are in the process of examining the possibility of incorporating provisions for the protection of sacred sites in their national biodiversity laws and policies, but in general, there has been very little achievement to date. However, where existing policies and laws can be reformed, it is anticipated that more effective protection of SNS could bring additional and important benefits at local, national and global levels.

While sacred natural sites are known to be highly important for biodiversity conservation, there has been no coordinated attempt, to date, to accurately assess their contribution to biodiversity; no global inventory of sites exists, and very little is known about the sociocultural matrix of traditional belief systems that have helped conserve such sites, or how to integrate them into existing protected area networks to help safeguard them without affecting the rights, wishes and traditional practices of traditional owners. The ability to influence international and national policies and legal frameworks in favour of SNS is also hampered by the lack of knowledge about legal, policy and technical tools, consistent with indigenous peoples' own cultures, values, knowledge and practices.

Despite the relevance of SNS to biodiversity conservation, and evidence of significant local-level protection and management, their role has been widely overlooked by state agencies, conservation agencies, environmental conventions[5] and legislation, and wider civil society. While several activities have been carried out in recent years for the protection of sacred sites by organizations like UNESCO, IUCN, WWF and ARC, no substantial progress has been achieved on the ground.

In the context of unequal power relationships, indigenous and traditional peoples frequently lack the means to promote their rights and responsibilities as stewards of their land and resources. They are often excluded from decision-making processes which affect their lands, and they frequently lack information, organizational and financial support to develop and defend their interests.

Protecting SNS

As indicated before, SNS have enormous value for biodiversity conservation. They are often places with limited access and restricted use which have preserved species of flora and fauna. Although they have a high degree of acceptance and respect from local communities, their contribution to conservation has been overlooked and undervalued by state and conservation agencies, policies and laws.

SNS are important for the vitality and survival of indigenous and traditional peoples' cultures. There is a fundamental link between the rights of people to control natural sites which symbolize their cultural and spiritual identity, and their continuing protection.

Understanding the sacred beyond the frontiers of the dominant world faiths, and winning respect and support for the spiritual visions and commitments of other peoples, particularly of indigenous and traditional peoples – which are frequently overshadowed or derided by the major

religions – are fundamental for effective protection of SNS, as they are for the respect and strengthening of cultural diversity.

One of the possible avenues to support the long-term survival of SNS is to explore how they can achieve similar status to protected area networks. This goal is intended to enhance their protected status, but at the same time to support the belief systems and sustain the cultural heritage and integrity of the communities that created them. These efforts will need to consider how to protect large sites in their integrity, how to integrate series of smaller sites, and how to preserve the ecological and sacramental links to the landscape.

Against the background described herein, and building on past and ongoing field work, as well as on recent policy discussions, IUCN, in partnership with the Rigoberta Menchu Tum Foundation (FRMT) and with the support of institutions such as the UN Environment Programme (UNEP), the Global Environment Facility (GEF) and UNESCO, started in 2005 a project called Conservation of Biodiversity Rich Sacred Natural Sites of Indigenous and Traditional Peoples.

The project goal is to achieve a strengthened enabling environment to support the conservation and sustainable use of biodiversity of sacred sites of indigenous and traditional peoples, focusing on six subregions (Meso-America, South America, South Asia, East Africa and West Africa). The specific objectives of the project are to:

* increase awareness globally and nationally, through improved information, knowledge sharing and communications
* strengthen legal and policy frameworks, globally and nationally
* improve the institutional capacity of relevant actors to work at the national and local levels
* make available lessons and field-tested tools.

The project engages with the political core of the problem. In the context of unequal social relations and historical inequities, the project recognizes that indigenous and traditional peoples require support to establish and defend their rights to protect and manage their sacred areas.

Appendix: benchmarks in international policy discussions relevant to the protection of sacred sites

Issues related to the protection of SNS have gained more international attention in the last few years. Here some examples prior to the International Symposium of Tokyo, from May to June 2005.

* A seminal meeting was the UNESCO International Symposium on Natural Sacred Sites (Paris, 1998).
* In Mexico in 2001, a meeting hosted by WWF and with the participation of IUCN, UNESCO, FRMT, indigenous organizations from Mexico, and Mexican non-governmental organizations (NGOs), decided to explore further coordination and collaboration.
* UNESCO organized an event on Asia-Pacific Sacred Mountains in 2001, and an International Symposium on Sacred Sites in 2003 in Kunming, China, with widely circulated reports.
* The Eighth Meeting of the Conference of the Contracting Parties to the Convention (COP) on Wetlands (Ramsar), held in November 2002, adopted resolutions related to the cultural aspects of wetlands, including specific references to sacred sites. Work on this subject was furthered at the Ninth COP in 2005.
* At the Fifth World Parks Congress, organized by IUCN in 2003, substantial discussions on sacred sites were held, which resulted in various products and gave impetus to new initiatives from IUCN. This was reaffirmed at the Third IUCN World Conservation Congress in 2004.
* The Convention on Biological Diversity (CBD) adopted, at the Seventh Meeting of its Conference of the Parties (COP 7), the *Akwé:Kon Voluntary Guidelines for Cultural, Environmental and Social Impact Assessment Regarding Sacred Sites and Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities* (February 2004).
* The same meeting of the CBD COP adopted a Programme of Work on Protected Areas, which, although not addressing specifically the issue of sacred sites, provides a very important framework in relation to integrating cultural and spiritual values and the rights and interests of indigenous and local communities.
* In Mexico, in May 2005, an International Meeting convened by the Mexican NGO Música por la Tierra, with technical support from IUCN, produced the Playa del Carmen Declaration, which raises important issues for the protection of sacred sites.

Notes

1. This definition, as well as other definitions in this paper, is a working concept proposed only for the purposes of this discussion and for facilitating an operational understanding of the issues in IUCN's work.
2. Some scholars associate the first category of sacred sites with the expressions and practices of animism, understood in anthropology as the belief in the existence of 'spiritual beings' embodied in natural elements – plants, animals, or inanimate constituents of nature (a concept originally coined by anthropologist Edward Tylor in 1871), or more modernly as 'a relational ontology in which the world is found to be, and treated as, a community of persons not all of whom are human' (Bird-David, 2002, cited by Harvey, 2006). In other words, in 'animist' spirituality there is an intrinsic sacramental dimension in natural sites themselves. The second category of

sacred sites corresponds to places dedicated by religious institutions or communities to worship and remembrance, where sacredness is not embodied in natural elements as such.

3. Sudipto Chatterjee (2001), pers. comm.; Malhotra and others (1999), cited by Gaikwad et al. (2004). Yogesh Gokhale (2003) reports the existence of 14,436 sacred groves in nineteen states of India, based on preliminary research by Malhotra et al.

4. Some of this is reflected in the Delos Initiative (see the paper in this publication by Thymio Papayannis and Josep M. Mallarach). For a broader approach to conservation and religions, see Dudley et al. (2006).

5. While conventions such as Ramsar on Wetlands of International Importance, and the Convention on Biological Diversity, have recently included some provisions or instruments relevant to sacred sites, the issue remains marginal and receives no significant support, politically, financially or technically.

References and further reading

Agrawal, A. 1995. Dismantling the divide between indigenous and scientific knowledge. *Development and Change*, Vol. 26, pp. 413–39.

Apffel Marglin, F. and Mishra, P. C. 1993. Sacred groves: regenerating the body, the land, the community. W. Sachs (ed.), *Global Ecology: A New Arena of Political Conflict*. London, Zed Books.

Bharucha, E. 1999. Cultural and spiritual values related to the conservation of biodiversity in the sacred groves of the Western Ghats. In: UNEP, 1999. *Cultural and Spiritual Values of Biodiversity. A complementary contribution to the Global Biodiversity Assessment*. Nairobi, UNEP, pp. 382–385.

Bird-David, Nurit 2002. Animism revisited. Graham Harvey (ed.), *Readings in Indigenous Religions*. London, Continuum, pp. 73–105.

Dudley, N., Higgins-Zogib, L. and Mansourian, S. 2006. *Beyond Belief: Linking Faiths and Protected Areas to Support Biodiversity Conservation*. Gland, Switzerland, WWF International.

Falconer, J. 1999. Non-timber forest products in Southern Ghana: traditional and cultural uses of forests. In: *Cultural and Spiritual Values of Biodiversity. A complementary contribution to the Global Biodiversity Assessment*. Nairobi, UNEP, pp. 366–369.

Gaikwad, S. S., Paralikar, S. N., Chavan, V. and Krishnan, S. 2004. Digitizing Indian sacred groves: an information model for web interfaced multimedia database. Vinya Ghate, Hema Sane and S. S. Ranade (Eds.), *Focus on Sacred Groves and Ethnobotany*. Mumbai, India, Prisam, pp. 123–28.

Gokhale, Y. 2003. *Communicating Importance of Sacred Groves to Broader Audience for Conservation of Biocultural Heritage*. Durban, South Africa, World Parks Congress.

Harvey, G. 2006. Animals, animists, and academics. *Zygon*, Vol. 41, No. 1, pp. 9–20.

Hamilton, L. 1998. Forest and tree conservation through metaphysical constraints. In: *'Natural' Sacred Sites: Cultural diversity and biological diversity.* Proceedings of International Symposium, Paris, 22–25 September 1998. Paris, UNESCO.

Kalland, A. 1999. A Japanese view on whales and whaling. In: *Cultural and Spiritual Values of Biodiversity. A complementary contribution to the Global Biodiversity Assessment*. Nairobi, UNEP, pp. 426–30.

Laird, S. 1999. Forests, culture and conservation. In: Cultural and Spiritual Values of Biodiversity. A complementary contribution to the Global Biodiversity Assessment. Nairobi, UNEP, pp. 345–362.

Malhotra, K. C. 1998. Cultural and ecological value of natural sacred biodiversity sites in Orissa, India: threats and opportunities. In: *'Natural' Sacred Sites: Cultural Diversity and Biological Diversity.* Proceedings of International Symposium, Paris, 22–25 September 1998. Paris, UNESCO.

Oviedo, G. 2001. Notes on the Panel's presentations and discussions. *Symposium on the Importance of the Protection of Sacred Natural Sites (SNS) for the Conservation of Biodiversity*. Mexico City, 12 June 2001. Gland, Switzerland, WWF International.

Richards, P. 1999. *Musanga cecropioides*: biodynamic knowledge encoded in mythic knowledge. In: *Cultural and Spiritual Values of Biodiversity. A complementary contribution to the Global Biodiversity Assessment*. Nairobi, UNEP, p. 366.

Schaaf, T. 1999. Environmental conservation based on sacred sites. In:*Cultural and Spiritual Values of Biodiversity. A complementary contribution to the Global Biodiversity Assessment*. Nairobi, UNEP, pp 341–342.

UNESCO, 1998. Schaaf, T. (ed.) *'Natural' Sacred Sites: Cultural Diversity and Biological Diversity.* Proceedings of International Symposium, Paris, 22–25 September 1998. Paris, UNESCO.

UNEP. 1999. *Cultural and Spiritual Values of Biodiversity. A complementary contribution to the Global Biodiversity Assessment.* Nairobi, UNEP.

UNESCO. 2000. *Culture-Based Environmental Conservation for Sustainable Development*. Draft Project Document, Paris, UNESCO.

Whiteley, P. and Masayesva, V. 1999. Paavahu and Paanaqso'a: the wellsprings of life and the slurry of death. In: *Cultural and Spiritual Values of Biodiversity*. *A complementary contribution to the Global Biodiversity Assessment*. Nairobi, UNEP, pp. 403–405.

WWF. 2001. *Linking Faiths and Conservation in the Madagascar Dry Forest Ecoregion*. Draft English Executive Summary of Final Report, WWF Madagascar Programme. Gland, Switzerland, WWF International.

Study of the legal status of sacred natural sites

Charlotte Herman, Division of Ecological and Earth Sciences, The Man and the Biosphere Programme, UNESCO, France

Introduction

Human cultural diversity shares a close relationship with biodiversity and the environment. Traditional societies have often protected parts of their natural landscapes or left a number of their elements intact. Most of these societies consider certain sites to be sacred places, where most or all human activities are prohibited.

Today, many of these sites are facing threats from unclear and insecure tenurial arrangements, unsustainable development projects, delegitimization of customary rights, centralized decision-making processes, and social, economic and political interests. Many sacred natural sites (SNS) have not received legal protection and are currently threatened or endangered. Others have been taken over from their traditional owners and incorporated in formal protected areas, with mostly negative consequences.

Until now indigenous communities have often not been represented in national decision and policy-making organs. Indigenous peoples and their unique systems of values, knowledge and practices have often been overlooked in the decision-making process.

Most countries have accepted international agreements, and work towards recognition of ethnic plurality and multiculturality. At a general level, indigenous rights are associated with or considered to be human rights. However, when it comes to materializing such general agreements in practice or in concrete legislative fields, such as indigenous forms of management of SNS, they tend to be denied. The current political climate seems to be changing; however, actual legal changes are often still devoid of content. There is an urgent need to correct the imbalance by actively integrating indigenous communities into the decision-making process.

One of the challenges related to the legal protection of SNS concerns the notion of 'legal recognition'. In political terms it is important to recognize that in most countries the existing official legal structure is fundamentally hierarchical. Recognizing the existence of this political hierarchy and the emerging properties of state law in particular contexts offers the possibility of devising tools and strategies for social struggle and progressive change. Formal rights and rules cannot act by themselves, and it is only the forces and relationships of society that can turn legal instruments into social practice. To stimulate the actual functionality or instrumentality of formal law and policies in local contexts, it is important to raise awareness among indigenous peoples of the existing legal instruments with regard to the protection of their rights, which includes the protection of their sacred sites.

Raising awareness of existing laws and their possible applications

- People are often not aware of the existence of the law. Once they know of its existence, they *do not understand the legal language*.
- The creation of *rights consciousness* and a *minimal level of legal literacy* are necessary.
- The international conventions and/or guidelines often have an improper translation. Translators need to do an honest translation of legal documents that concern the rights of the indigenous communities. This is extremely important since improper translation could lead to the abuse of the rights of indigenous communities by other parties.
- The responsible government has to *communicate in the most appropriate language* to the community, including informing the community of the existing national laws and international laws or conventions.
- Once indigenous communities are aware of the existence and the meaning of the obligations it is their responsibility to take proactive *measures to ensure compliance* with these obligations.
- Indigenous people are usually not represented in national decision-making organs. This contributes to a situation of increasing inequality, conflict and ecological

destruction. In this context *information and capacity-building strategies* are necessary to *support the actions taken by the indigenous communities* to protect their SNS.

* The effectiveness of the international conventions remains in the national implementation of these international documents. In setting the national context for the protection of SNS there are often different jurisdictions to consider when implementing international obligations within the national legal system. In order to ensure the implementation of the international obligations, there is a need for a gap analysis on the national level to ensure that the obligations are fulfilled on the different national levels.

The national legislation often fails for a number of reasons, such as the loss of important indigenous knowledge, a lack of consideration when expressing indigenous knowledge in legal language, the existence of ambiguities in property rights, the cultural significance of the site not being taken in consideration, the legislation failing to recognize the customary law of the indigenous communities, and so on.

Property rights

SNS are often linked to indigenous people. The collective rights of indigenous peoples include ownership and control of territory and the right to give or withhold consent to activities related to that territory and its attendant resources. The concept of territory, as used here, encompasses the multiple and various forms of indigenous interaction – spiritual, physical, social, economic, cultural and so on – with their land and resources.

The three main areas to define the political, economic and cultural relations between indigenous peoples and states are (1) self-determination, autonomy and self-government, (2) lands, territories and resources, and (3) political participation rights.

The legal protection of SNS could be achieved through the use of property rights. As mentioned in Article 13(1) of the International Labour Organisation (ILO) Convention No. 169, governments shall 'respect the special importance for the cultures and spiritual values of the peoples concerned of their relationship with the lands or territories, or both as applicable, which they occupy or otherwise use, and in particular the collective aspects of this relationship'.

Many SNS are threatened by activities that transform them into more productive areas. These activities cause serious damage to the biodiversity present on these sites, they decrease the surface of these sites and often destroy the artefacts present, as well as violate the rights of the indigenous people to freedom of expression and belief.

Since sacred sites are mostly located on public land, the indigenous people often do not make use of a legal mechanism to defend themselves. Handing over public land to the indigenous community is a very sensitive issue to most national states. The presence of rich natural resources which often make these sites profitable economic areas complicates this issue.

One of the methods that could be used to protect SNS is the process of mapping. Non-indigenous mapping of SNS can lead to dispossessing indigenous communities of their territories and their cultures, while the wise use of mapping can help to recover land and rehabilitate the well-being of the community. By the creation of these maps a dialogue between the indigenous communities and the legal and political authorities could be established.

A system of recognition of indigenous territory by mapping, including the SNS that are located on the territory, should be based on following procedure:

1. A territorial claim should be based on the indigenous people's territorial maps and on a detailed legal study. The maps and the legal study need to include the following elements:

* Information: By mapping lands that the indigenous communities traditionally own, occupy and use, these communities will be better able to inform and educate government agencies and other institutions about the ways in which they relate to their territories and the significance of owning their lands.
* Privacy: It should be ensured that only the information the communities agree to make public is placed on the maps. In that way, sensitive information such as the location of the SNS can remain secret. The SNS would receive (indirect) legal protection since they are located in the area under legal protection by mapping.
* Conservation: The indigenous community needs to prove that its customary uses are in keeping with traditional practices and are clearly 'compatible with conservation and sustainable use'.

2. Review of the legal study by an independent institute that controls the legal claim and declares it free of flaws. A document is declared free of flaws if it is free of a defect that would render it invalid.

3. Approval of the legal claim by the authorized ministry before reception of the formal recognition of the indigenous territory by the government.

4. Once a territory is recognized by a government the indigenous community acquires a legal title, which provides a basis for or justifies a claim.

5. A combination of the letter of the law with anthropology-oriented policy is needed. During the elaboration of a land title system, attention should be given to indigenous representational politics, problems generated by the interaction of traditional law and custom, and the possibilities of management relations between the land title system and general law.

6. Consultation with the indigenous communities.

The UN Draft Declaration on the Rights of Indigenous Peoples states in Article 3 that:

'Indigenous people have the right to self-determination. By virtue of that right they freely determine their political status and freely determine their economic, social and cultural development.'

The right to self-determination has been the most prominent demand of the indigenous rights movement. It is viewed as the mechanism by which indigenous people can enjoy all other human rights, and ensure their cultural integrity and survival. It can broadly be defined as the right to freely determine the nature and extent of their relationship with the state and other people. Territorial rights are integral to indigenous peoples' right to self-determination.

An indigenous right to self-determination is contentious, as certain states claim that recognition of this right will lead to secession and territorial dismemberment. For their part, indigenous people, with a few exceptions, have stated that they have no desire to secede from states. Currently state resistance to indigenous self-determination, although still present, seems to be waning.

Article 26 of the UN Draft Declaration on the Rights of Indigenous Peoples recognizes and requires protection of indigenous peoples' unique relationship with their land and resources. If indigenous people are unable to control their territories, they will also be unable to determine and control their social and cultural well-being and development, as the two are inextricably related.

A mechanism to resolve this problem could be realized by the establishment of Indigenous Territorial Entities (as in the provisions of the new constitution in Colombia, in 1991). Indigenous Territorial Entities are identified as part of the organization of the state, and are entitled to 'autonomy in the negotiation of interests'. The indigenous territories should be considered as non-transferable collective property, and it should be reiterated that their administration will be carried out by indigenous councils.

At the federal legislature, elected senators from among the indigenous communities would function as representatives of those communities. In this way the indigenous communities should have an effective voice on the national political level and in law-making processes. This kind of representation should facilitate the elaboration of a legal protection mechanism with regard to SNS.

There is also another dimension to the issue of demarcation of territory, concerned with the different currents in the present discourse on environmentalism. While transnational environmental groups are wary that the arbitrary demarcation of indigenous lands within nation-states could negatively impact on the ecological balance, they actively support indigenous peoples' determination to press for territorial claims. This development could hopefully check the influence of multinational companies, which are keen to exploit the resources of the countryside.

For example, the process of demarcation and regularization of some indigenous territories as against other indigenous regions is greatly accelerated largely at the behest of some multinational companies or their lobbying groups. It is clear that the creation of indigenous territories and their empowerment by the state in collusion with transnational capital or with multinational companies as 'objects of outright plunder' should be avoided. Therefore a review of the process of demarcation and regularization of some indigenous territories by an independent institute that controls the legal claim and declares it 'free of flaws' is essential to avoid abuses by the state or any other interested party.

Anthropological studies suggest that certain land areas are still used by different communities for different purposes without giving rise to conflict. Some of these land areas are effectively 'stateless societies' in the sense of not possessing any functionally differentiated and institutionalized government structure. It should be borne in mind that the demarcation of indigenous territories and the rights related to these territories differ from case to case. However, international guidelines, which should be taken into consideration in the demarcation of indigenous territories could be useful, especially if there is no national regulation with regard to this matter.

During the elaboration of a protection mechanism fo SNS, the problem often arises that sites are located on public land, which result in conflicts with regard to property rights. When the government designates public land, there is the potential risk that it will destroy sacred sites, sites of worship or burial grounds located on the designated public land. In this regard the designation of the land would destroy a source of religion, art and culture, which is in conflict with international conventions on human rights and the rights of indigenous people. Increased and unrestricted public use of the land where the sacred sites are located could destroy not only the cultural and spiritual relationship of the indigenous people with the land, but also the fauna and flora contained within it.

A solution to the problem could be the creation of an agreement between the government and the indigenous people to preserve their rights, while permitting responsible use and development of *their* areas located on public land. One of the provisions in the agreement could be limited public access to areas where sacred sites are located.

Human rights/environmental human rights

This report evaluates the human right dimension of significant environmental issues by showing linkages between environment and human rights within the context

of sustainable development, and examining relevant scientific and technical documents, regulatory guidelines, and international treaties and conventions.

Environmental protection and human rights are gaining an increasing level of integration as overlapping interests continue to be identified. However, the role of a healthy environment for the protection and stability of peoples, both present and future, and the need for sustainability to secure the availability of essential resources, are gaining recognition. Environmental values should be systematically included in the human rights discourse.

Traditional international agreements concerned with the conservation of wildlife and wild resources may have little application to human rights issues, and may in fact be counter to certain human rights interests. Earlier treaties tended to focus on an individual species or group of species as a resource. This focus created the potential for placing preservation and conservation concerns above human concerns. Excluding indigenous people from conservation plans created difficulties for both the indigenous people and the conservation efforts. Recently, the need to address human issues has been recognized as essential to developing successful conservation programmes.

The environmental and sustainable development communities may not realize the extent to which the accomplishment of their goals depends upon the integration of human rights into their work. It should be stressed that the process of recognizing, developing and realizing the environmental dimensions of human rights, as well as the human rights dimension of environmental protection, should be further accelerated. The interconnectedness between human rights and the environment is clear. The responsibility of leaving a healthy and life-sustainable planet for our children is not only consistent with the more traditional articulations of human rights, it is indispensable to realizing them.

Attention to human rights in designing and implementing environmental or sustainable development projects promotes many of the desirable outcomes that are called for in the environmental and development literature. A human rights approach is based on participation, transparency, nondiscrimination, and a focus on the most vulnerable members of the population.

With regard to the legal protection of SNS, the protection of the rights of indigenous people can be seen as the protection of the most vulnerable group of the population.

A human rights approach gives the individual a claim or set of claims against the government, with avenues of resource provided through the legal system if the government does not live up to its obligations. A human rights approach also comes with practical advantages. It ensures that decision-making is the result of a multi-stakeholder process that is equitable, participatory, and sensitive to the most vulnerable members of the population, and that builds capacity. However, the entire character of the exercise changes when participation is a right, rather than a policy or best practice of project managers, and people are the subjects and not the objects of development.

Linking environmental protection and human rights should operate on two tracks: first, interpreting existing human rights, to clarify their environmental dimension; and second, developing monitoring tools and resources for them. In this framework, the establishment of a database to help protect the traditional ecological rights of indigenous communities should be a useful tool. The rich biological diversity that is present on many SNS and the traditional knowledge of the indigenous people worshipping there could be perfectly classified under traditional ecological rights.

Environmental issues frequently involve competition over scarce resources; a scenario that often leads to human rights violations. In the case of SNS, the presence of scarce resources such as medicinal plants, water, ores and other raw material often lead to conflicts between indigenous people and the non-indigenous population. In cases where the government ignores the rights of the indigenous people, this could be classified in some cases as a violation of human rights.

Incorporation of environmental awareness into human rights issues, as well as human rights awareness into environmental and sustainable development issues, is extremely necessary on all policy levels. A criticism of the explanation above could be that most of the major human rights instruments predate the current awareness of the environment and therefore do not recognize specific environmental rights. This criticism could be refuted by stating that the major human rights treaties contain provisions with obvious environmental dimensions.

A lot more work is needed on education and awareness concerning the environmental dimension of human rights. The Office of the High Commissioner of Human Rights should be a catalyst in promoting awareness of the intrinsic link between human rights and environmental protection, and operationalizing environmental issues in all areas of its work, including standard-setting, information-gathering, States-Parties' reporting, monitoring and technical assistance. The implementation of this task should go beyond the point where human rights work typically stops, to address issues of national-level implementation within a human rights framework. General comments and recommendations should be drafted and adopted on environmental and human rights topics (such as recognizing as human rights issues the patenting of life forms and indigenous knowledge).

The link between biodiversity and human rights

Loss of biodiversity has both a direct and indirect impact on human health. The most direct impact is the disruption of natural ecosystems, whereby local and regional food webs are permanently destroyed, leading to decreased forest and

agriculture productivity, and decline of marine ecosystems. Indirect impacts to human health occur through loss of many valuable biological organisms, including undiscovered plant, animal and microbial species that have potential therapeutic products, and medicinal drugs (often present on sacred sites).

Since human health is declared as a human right in a number of international declarations, and human health is related to a healthy environment, the conservation of biodiversity can be considered as a human right.

It should be apparent that the environment and human rights are inextricably linked. As we increasingly recognize the serious impact of a degraded environment on human health and well-being, we are better placed to adjust our policies and cultural practices to reflect our enhanced understanding of those linkages between environmental protection, public health and human rights. As a result, we should be able to protect human rights and human dignity within the broader social, economic and cultural context by drawing from and contributing to those who are actively engaged in the environment and public health arenas. This understanding should allow individual and organizations working in the environment, conservation and public health fields to develop better working relationships with, and to gain more knowledge of, human rights institutions, approaches and instrumentalities.

The interdependence of human rights, environmental protection and sustainable development can be described using the metaphor of a triangle. Although sustainable development is the overarching goal, it cannot be achieved without also respecting human rights and protecting the environment. Each side is linked to, and mutually supports, the other. Without each one, effective realization of the other two is not possible.

Customary law

Meaningful regulation of peoples' interactions often does not occur through official or state law, but through alternative unofficial regulatory orders, such as customary and/or religious rules and institutions. In order to grant these other forms of regulation equal conceptual and political legitimacy, they must be recognized and publicly named 'law'.

The role of elders in indigenous communities could be considered as having the same impact as official state law. When elaborating a legal system to protect SNS it is extremely important to take into account the knowledge of elders, which can be considered as customary law. Two methods can be used: inclusion of the customary law in state law, and official recognition of the customary law as law.

The principle of self-determination (as mentioned above), defined in terms of historic rights and cultural survival, seeks the internal functioning of legal and political habits and customs, or what might be called customary law. What is more, recognition of distinct indigenous political and juridical structures and economic, social and cultural development in accordance with their own norms and values calls for 'internal self-determination'. Because of these complexities, operationalizing the self-determination of cultural identity among indigenous communities calls for a regime of legal pluralism. A variety of techniques can be used to recognize systems of indigenous laws and customs and to promote the identification of their values. In other words, the framework of laws can be modified to accommodate aspects of indigenous laws and customs in the administration of justice. The national legal system might incorporate, wholly or partially, aspects of indigenous laws and customs. The incorporation of indigenous laws and customs into the national legal system should facilitate the process of creating a national legal mechanism for the protection of SNS, especially if there already exist indigenous laws and customs which refer to SNS.

Applicable international law

The following list is in no way comprehensive, but includes major conventions that refer to human rights, the rights of indigenous people and environmental rights.

Charter of the United Nations (Article 1)

This requires all the members to promote equal rights and the self-determination of peoples, and respect for human rights and for fundamental freedom for all without distinction as to race, sex, language or religion.

Universal Declaration of Human Rights

This requires respect for rights to own property and mandates that no one shall be arbitrarily deprived of property. The declaration also requires respect for religion or belief in teaching, practice, worship and observance.

The following articles of the Universal Declaration of Human Rights are of particular importance: Articles 2, 7, 17 and 18.

Facilitating non-indigenous development by national governments by creating the ability for the non-indigenous to practise and teach their traditions, and thus promote the demise of their people and their future, can be classified as discrimination (a violation of Article 2 and Article 7 of the Universal Declaration of Human Rights). This could be the case if a national authority allows, or worse still promotes, an economic activity of non-indigenous people on indigenous territory, by exploiting the natural resources present on the indigenous territory.

Article 17 of the Universal Declaration of Human Rights is violated in the case whereby (indigenous) people have been arbitrarily deprived by the government of their right to own property. Violation of Article 17 of the Universal

Declaration of Human Rights occurs if property claims are delayed, ignored, or if the government assigns a property title that is less then the entire surface of the property. If the land that is claimed by the demanding party contains a site that is sacred or that is worshipped by the demanding party, there is also a violation of Article 18 of the Universal Declaration of Human Rights.

International Covenant on Civil and Political Rights (ICCPR)

The following articles of the ICCPR are of particular importance: Articles 1, 26 and 27.

Nobody may be denied their right to self-determination, as written in Article 1.1 of the ICCPR. In short, does this means that no minority with limited power, such as indigenous people, may be disregarded by a government exploiting an imbalance of power?

Article 26 of the ICCPR uses the words 'All persons are equal before the law and are entitled without any discrimination to the equal protection of the law.' Domestic law should provide equal protection under the law. The cultural and spiritual relationship of indigenous people to SNS could be considered as religion, as mentioned in Article 26.

Facilitating non-indigenous development by the national government through creating the ability for the non-indigenous to practise and teach their traditions and thus promoting the demise of their people and their future, can be classified as discrimination.

As written in Article 27 of the ICCPR, no ethnic, religious or linguistic minorities shall be denied the right to enjoy their own culture, to profess and practise their own religion, or to use their own language. The inability for indigenous peoples to practise their rites on their SNS can be classified as a violation of this article.

Draft Declaration on the Rights of Indigenous People

Articles 21, 25 and 26 of the Draft Declaration on the Rights of Indigenous People are of particular importance.

The most important part of Article 21 in relation to the legal protection of sacred natural sites is, 'Indigenous peoples have the right to engage freely in all their traditional and other economic activities.'

Under Article 25, indigenous peoples have the right to maintain and strengthen their distinctive spiritual and material relationship with the lands, territories, waters and coastal seas and other resources that they have traditionally owned or otherwise occupied or used, and to uphold their responsibilities to future generations in this regard.

Under Article 26, indigenous peoples have the right to own, develop, control and use the lands and territories, including the total environment of the lands, air, waters, coastal seas, sea-ice, flora and fauna and other resources that they have traditionally owned or otherwise occupied or used. This includes the right to the full recognition of their laws, traditions and customs, land-tenure systems and institutions for the development and management of resources, and the right to effective measures by states to prevent any interference with, alienation of or encroachment upon these rights.

The Stockholm Declaration (1972)

The Stockholm Declaration became the forerunner for treaties dealing with conservation and biodiversity concerns on a broader scale. The view of conservation outlined in the Stockholm Declaration includes the welfare of humans as a foundation for international environmental agreements. Treaties and declaration following this pattern integrate human rights and environmental protection.

The principles of sustainable development, which focuses on the need for intergenerational equity, sustainable uses of natural resources, equitable distribution of those resources and the integration of environmental considerations and economic development, can be traced back to the principles recognized in the Stockholm Declaration (Principles 1, 2 and 16).

The most notable instrument stemming from the 1972 Stockholm Principles has been the Agenda 21 declaration, drafted at the 1992 UN Conference on Environment and Development held in Rio de Janeiro. It set forth a comprehensive plan for the integration of environmental and development concerns. The implementation strategy requires agreement at the local, national and international levels.

The desire to strike a balance between human development and the environment, as sought by the conference in Stockholm, continues to play a major role in the development of international agreements today. The inclusion of equitable resource distribution in the definition of sustainable development offers a tool for the protection and development of human rights within the framework of environmental protection.

Agenda 21

Integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future.

Rio Declaration on Environment and Development (1992)

Principles 22 and 23 of the Rio Declaration are of particular importance. Principle 22 promotes indigenous participation, but does not go much further. Note especially the failure to recognize indigenous peoples' collective rights by the consistent use of the term 'indigenous people' rather than 'indigenous peoples'.

The Rio Declaration affirms the rights of indigenous communities in managing their environment in order to preserve their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

International Labour Organisation (ILO) Convention (No. 169) Concerning Indigenous and Tribal Peoples in Independent Countries

It is a governmental duty to consult indigenous people in good faith during the law-making process, as written in Article 6.1a. The government should not only consult indigenous people, it should also inform them about the working of the law-making process and the legal consequences before approving legislation and bringing it into force.

Article 7 is one of the general principles of the Convention, and provides a framework within which other articles can be interpreted. Although qualified and weakened by the phrase 'to the extent possible', it recognizes that indigenous peoples have the right to some measure of self-government with regard to their social and political institutions, and in determining the direction and nature of their economic, social and cultural development.

Other articles of the ILO Convention that are of particular importance are Articles 2§2(2), 4.1, 5 and 8.

Part II, Land

All articles under this section can be applied to the legal protection of SNS. More specifically, in regard with the property rights of these sites, Article 13.1 of this part of the convention mentions specifically that governments shall respect the special importance for the cultures and spiritual values of the peoples concerned of their relationship with the lands or territories, or both as applicable, that they occupy or otherwise use, and in particular the collective aspects of this relationship.

Articles 14, 15, 16, 17, 18, and 19 of Part II of the ILO Convention are of importance too.

The Convention on the Elimination of All forms of Discrimination Against Women (CEDAW)

In many cases, sacred sites have been accompanied by access restrictions, using criteria such as age and gender. If access to a the sacred site is restricted to women only, and they have been discriminated against or violated in their right to practise their cultural or religious activities, a legal claim to protect the sacred site could refer to Article 1 and Article 3 of the CEDAW.

If a government's decision facilitates a 'distinction, exclusion or restriction made on the basis of sex which has the effect or purpose of impairing or nullifying the recognition, enjoyment or exercise by women … on a basis of equality of men and women' and women are deprived of their practice and its secret nature, the effect will be the end of their procreation ritual and potentially their race.

The fact that women attribute a special status to natural sites set aside as sacred – either through the recognition of residing deities and spirits or as shrines dedicated to ancestors – can be classified as a part of their culture.

World Summit on Sustainable Development (WSSD) Plan of Implementation

Related paragraphs are Paragraph s5, 5(bis) and 152.

The Convention on Biological Diversity (CBD)

Article 8(j) of the CBD attempts to address indigenous intellectual property rights by requiring that State-Parties 'Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities … relevant for the conservation and sustainable use of biological diversity.' With regard to the (potentially substantial) benefits derived from indigenous intellectual and cultural property, it only requires that state-parties 'encourage the equitable sharing of those benefits'.

Article 8(j) of the CBD can be used to protect indigenous intellectual property when relevant for 'conservation or sustainable use of biological diversity'. It is disappointing that this article does not protect indigenous intellectual property in general, although it can be used to protect SNS if the national authority links the cultural and spiritual relationship of indigenous people to their land and indigenous intellectual property.

A negative point linked to Article 8(j) is that it is rendered inoperable, or at least subject to manipulation, in most cases because of the phrase 'Subject to its national legislation', as most states' legislation precludes the recognition of indigenous intellectual property rights.

Article 10(c) of the CBD includes land and resource rights within its ambit. This article should also be read to include a certain measure of protection for the ecosystem and environment in which those resources are found. This article is limited by the requirement that the cultural practice(s) in question be 'compatible with conservation or sustainable use'. This begs the question: on what basis will these decisions be made, by whom, and how will this relate to guarantees of non-discrimination and cultural integrity? However the legal protection of SNS could be based on this article, since the existence of SNS can be considered as a cultural practice.

This article, by implication, should also be read to include a certain measure of protection for the ecosystem and environment, in which 'biological resources in accordance with traditional cultural practices' are found. SNS are often reservoirs of biological resources. Those resources, such as the presence of medicinal plants, could be perfectly linked to the text of the article, 'biological resources in accordance with traditional cultural practices',

and receive on this basis the legal protection that is connected to the CBD.

How about enforcement?

The preamble of the CBD affirms that the conservation of biodiversity is a common concern of humankind. In legal procedures a common concern is not recognized as a basis for a claim. A state can only make a dispute pending or submit a claim if there is a violation of its own national interest. This legal technical aspect obstructs the effective maintenance of international environmental standards.

Each Contracting Party shall present to the Conference of the Parties (COP) reports on measures that it has taken for the implementation of the provisions of this Convention and their effectiveness in meeting the objectives of this Convention (see Article 26 CBD). By virtue of Article 23, the Conference of the Parties needs to take into consideration the information of the submitted reports. If it turns out that a Contracting Party does not comply with the Convention, there is almost no possibility of penalizing the Contracting Party since the COP can not give binding indications.

Although Article 27 of the CBD contains a relatively exhaustive dispute settlement procedure, in practice none of these possibilities are used by the Contracting Parties. Even when it is clear that certain Contracting Parties do not comply with their obligations, the other Contracting Parties refuse to enforce compliance with the CBD by using the legal procedures of Article 27. The resistance of the contracting parties to using the legal procedures can be explained by the following barriers:

* Resisting the use of legal procedures does not occur in all areas. For example, the act of a state not acting in accordance with a trade agreement is often experienced by the other contracting party as a violation of its national interests. In contrast, not acting in accordance with an environmental convention tends not to be experienced as a violation of national interests. This can be explained by the fact that a state will always make an assessment of interests before using legal procedures against another state. It seems that individual states subordinate environment interests to political and economic interests.
* There is also a juridical barrier which contributes to the fact that environmental disputes are rarely solved by means of legal procedures. Action by a certain country that affect biological diversity could be classified as a violation of the CBD. However, in many cases the legal problem is that there is no specific state that can be identified as the 'injured state'. To be in the position of 'injured state' is, under current international law, still a precondition for being able to proceed against a violation. The result is that before being able to proceed, a state must prove that its national interest has been damaged.
* If a state develops or stimulates on its own territory activities that have a serious impact on the local biodiversity, then the only 'injured state' is the state itself. In the case whereby a state threatens the biological diversity of the 'global commons', for example the oceans, it is impossible to identify an 'injured state' that suffers : by definition these are areas that fall outside the national jurisdiction of states. Both cases illustrate the problem of the maintenance of common interests by individual states whose national interests are not directly affected.

A solution for this problem can already be found in international law. In the field of human rights, the International Court of Justice has recognized the *erga omnes* character of some human rights. This special status authorizes all states to start a legal procedure against a state that violates such *erga omnes* standards. Each participating state can then be classified as an 'injured state'. The reasoning is the following: when a standard that is of common interest for the whole international community is violated, the consequence is that each state is violated in its own interests, and each state has the right to proceed against this violation. International environmental standards should deserve the special *erga omnes* status since the conservation of biodiversity is of common interest rather than of national importance.

Akwé:Kon Guidelines

The Akwé:Kon Voluntary Guidelines were developed in cooperation with indigenous people to implement the provisions of Article 8(j) of the CBD and to ensure that indigenous people are able to participate in impact assessments on any projects that may affect them.

The scope of the Akwé:Kon Voluntary Guidelines is to provide the indigenous people with information, possibilities and mechanisms to actively participate in impact assessment processes on their sacred sites or on lands and waters. To realize the good application of these guidelines it is very important to continue the process of raising awareness among indigenous and local people and other stakeholders, such as local and national governments and the international community, about the usefulness of the Guidelines.

The Guidelines are extremely useful for protecting SNS since they include objectives such as taking into account the cultural, environmental and social concerns and interests of indigenous and local communities, and support for the effective participation of indigenous and local communities in screening, scoping and development-planning exercises.

The Guidelines are one of the few international instruments that explicitly mention the term 'sacred natural sites', and that aim to prevent the adverse impact of unsustainable development on sacred sites, land and waters that were traditionally occupied and/or used by indigenous people.

The voluntary nature and the sentence 'subject to national legislation' could provide governments with strategies to avoid their responsibilities under these Guidelines (Annex I of this publication).

Draft Declaration on the Role of Sacred Sites and Cultural Landscapes in the Conservation of Biological and Cultural Diversity

This document is extremely useful in the fight against the loss of biological and cultural diversity, since it explicit recognizes the link between nature and culture.

Conclusion

Although indigenous peoples are making inroads in international environmental fora there is still a long way to go before indigenous rights are fully recognized and incorporated into legal instruments. This will only occur if the national and international legal personality of indigenous people is completely recognized, and they are able to take part directly in the drafting, negotiation and implementation phases of national and international environmental and development instruments.

The need for effective indigenous participation is especially important in the context of the environment, biological diversity and sustainable development, as indigenous peoples' territories encompass vast areas of the earth's remaining biological diversity and threatened ecosystems.

International concerns about protecting the global ecological system and human rights have drawn the attention of transnational advocacy groups. Marginalized and excluded indigenous peoples should be actively engaged in established links with transnational civil society in an effort to bypass state mediation. They could do so by situating themselves in global civil society while maintaining strong ethnic, cultural and local loyalties. Indigenous peoples should emerge as a new social and political actor in this sector. Once they have become political actors it will be easier for them to claim legal protection for their SNS. Constitutional initiatives by individual states could enforce these reform measures and help indigenous people to become integrated into the political and legal system of the state. A state that recognizes indigenous people in its constitution will therefore be obliged to not only protect but also project it through suitable legislative measures.

While acknowledging the rights of indigenous peoples to their social organizations, customs and traditions, states should also declare their rights to the lands they traditionally occupied as 'original'. By recognizing their lands as being 'traditionally occupied', the legal structure should implicitly endorse the cultural diversity of the territory (as with the Brazilian constitutional changes of 1988). The recognition of this cultural diversity could provide a legal basis for claiming protection for sacred natural sites, since these sites can be considered as being part of the cultural diversity.

References and further reading

AAAS. 2002*a*. *International Agreements*, Treaties, and Conventions on Environment and Human Health: A Summary Note by Chris Calamati. Washington DC, American Association for the Advancement of Science. http://shr.aaas.org/hrenv/docs/wssd12_2001.htm (Accessed 30 May)

AAAS. 2002*b*. *Submission of the Science and Human Rights Program of the American Association for the Advancement of Science to the Joint OHCHR-UNEP Seminar on Human Rights and the Environment, Geneva.* http://shr.aaas.org/hrenv/docs/wssd12_2001.htm (Accessed 30 May)

AAAS. 2003. *Environmental Protection, Public Health and Human Rights: An Integrated Assessment*. Washington DC, American Association for the Advancement of Science. http://shr.aaas.org/hrenv/docs/ahmd.pdf (Accessed 30 May)

Boelens, R. 2003. *Local Rights and Legal Recognition: The Struggle for Indigenous Water Rights and the Cultural Politics of Participation*. Wageningen, pp. 1–19.

Bronkhorts, S. A. 2002. Handhaving van de CBD door de rechter: het behoud van biodiversiteit als gemeenschappelijk belang van de gehele mensheid. *Ecologie en Ontwikkeling*. Netherlands: Netherlands Committee for IUCN. (In Dutch.)

Daniels, A.E. 2002. Indigenous peoples and neotropical forest conservation: impacts of protected area systems on traditional cultures. University of Florida, *Macalester Environment Review*, www.macalester.edu/environmentalstudies/MacEnvReview/indigenouspeoples.htm (Accessed 27 April 2006.)

Ellison, C. and Golten, R. 2001. *Petition for U.N. Intervention to Protect the Rights of Ngarrindjeri (aboriginal) People on Hindermarsh Islands, Australia*. Denver, International Human Rights Advocacy Center at the University of Denver, http://www.du.edu/intl/humanrights/ngarrindjeri.pdf (Accessed 30 May)

Forest People. 2005. *Community-Based Mapping and Research on Customary Resource Management*. http://www.forestpeople.org/Briefings/consv-policy-cbd/ (Accessed 30 May)

Houtzager, P. and Franco, J. 2003. When the poor make law: comparisons across Brazil and the Philippines. *IDS Bulletin*, Vol. 32, No. 1. Brighton, England.

KNAW Onderzoeks Informatie. 2003. *Diversiteit van wettelijke systemen en mondiale orde*. http://www.onderzoeksinformatie.nl (Accessed 27 April 2006)

Mackay, F. 2002. The rights of indigenous people in international law. L. Zarsky (ed.), *Human Rights and the Environment: Conflicts and Norms in a Globalizing World*. London, Earthscan, pp. 9–30.

Mantziaris, C. and Martin, D. 2000. *Native Title Corporations: A Legal and Anthropological Analysis*. Sydney, Australia, Federation Press, pp. 450.

Singh, P. 2005. *Indigenous Rights and the Quest for Participatory Democracy in Latin America*. New Delhi and London, Sage.

Film presentations

Sacred traditions in sacred places: Tajikistan

Safar Hakdodov, Kinoservice Ltd., Tajikistan

This documentary was largely filmed in Badakhshan and the south-west regions of Tajikistan, including Kubodiyan, which have more than a thousand years of history. The film presents the preaching of Nosir Khusrav, and includes the Islamization of the region, the architectural heritage of the sacred places, shrines and sacred springs, which are protected by the local population, as well as its humanistic and sacred traditions.

Despite the existing difficulties, the region's population assigns importance to these sites due to their connection with the ancient spiritual culture in terms of literature, music and traditional architecture, which is specific to the geographical conditions.

Although these sites hold a special importance within the sphere of the sacral-religious spiritual life of the local population, they are open to those of other religious persuasions from all Central Asian countries, such as Afghanistan, China and Pakistan. The sacred sites that are characteristic of these regions provide an opportunity for in-depth and complex research of the region's pre-Islamic and Islamic cultural past.

In the light of reverence: when every place is sacred

Christopher McLeod, Sacred Land Film Project, California, USA

It may be more important now to enter into
an ethical and reciprocal relationship with everything
around us than to continue to work toward the
sort of control of the physical world that,
until recently, we have aspired to.

Barry Lopez

Every working day, bulldozers climb the back of Woodruff Butte in Arizona, quarrying gravel to pave local highways and tearing away rocky sites that Hopis on pilgrimage have been visiting for a thousand years. Woodruff Butte is now private property, and the Hopi have appealed in vain to its owner to stop razing their shrines. In the last ten years, all eight Hopi shrines on Woodruff Butte have been destroyed.

'When we all visited the property, I was told if they showed me specifically where [a shrine] was on the property, then it would not have religious value to them any more,' says the butte's owner, Dale McKinnon. 'In other words, they couldn't show me. And I cannot possibly work around something that I can't see. So, I guess I did bulldoze it. I couldn't see it. I didn't know what to work around.'

We captured the bulldozer damage and the butte-owner's comments on film during the production of *In the Light of Reverence*, our documentary film that was broadcast in August 2001 in the United States on the public television series P.O.V. (Point of View) to an audience of 3 million viewers. As we made the film through the 1990s and then worked distributing it for the last four years, our intention has been to capture the intense clash between the first Americans, more than 500 distinct cultures, and the waves of people who came here from Europe, and to show it as a clash of values, a clash of worldviews, and at its deepest level, a metaphysical clash.

At its heart, the clash entails very different views of what constitutes power and the appropriate human relationship to power as it manifests in nature. The essence of this culture clash is the question, 'What is sacred?' Or, stated another way, 'What do we as a culture value most deeply?'

Fig. 1 A view of Woodruff Butte Photo: C. McLeod

Before we completed the film, I journeyed to the Hopi mesas to show a rough cut to the Hopis who had participated in the making of the film, because we had committed to working closely with all of the native people in the film during editing. When my old friend Fermina Banyacya heard Dale McKinnon's statement about bulldozing the Hopi shrines, she began to shake her head.

'What is it with white people?' she whispered. 'Seeing is believing, and that's all there is to it. It makes me so mad!'

Though sacred mountains may be visible, it is the invisible realm that holds the key to understanding the sites Native Americans hold most precious. Their songs and stories, visions and prophecies, secret traditions passed down from the ancestors: these are the intangible cultural practices that honour the life force of the land and carry deep emotional power for the communities that inhabit and protect America's sacred places. Yet the American public has little understanding of Native American sacred landscapes, and it was to fill this educational need that we set out to make the film.

Imagine your birthplace, the burial grounds of your family, or your place of worship besieged and bulldozed. What would you do?

Lands sacred to indigenous people are threatened by the relentless push for energy resources, timber, minerals, water, recreational opportunities, luxury homes, archaeological excavations and New Age ceremonies. Protections granted to sacred sites in recent decades in the United States are now being overturned by a hostile administration, and carefully crafted laws are being weakened. Yet a consensus is building across America – and around the world – that past injustices should be rectified and that the sacred places and religious freedom of indigenous peoples should be respected.

That's a good first step. But this struggle is not just about native peoples' sacred natural sites. People everywhere have sacred places they are trying to protect and stay connected to through ceremonies that honour life and celebrate the diversity, power and beauty of the natural world.

In the Light of Reverence has proven to be a potent educational resource for stimulating dialogue and reflection, exploring American history, seeking reconciliation between conflicting cultures, and protecting religious freedom and sacred land. The film is supplemented by an extensive website (www.sacredland.org), a Teacher's Guide, a Sacred Land Reader and a DVD, which includes additional scenes, an extended interview with Lakota scholar Vine Deloria, Jr., interviews with the filmmakers, and an update about other threatened places like Zuni Salt Lake in New Mexico and Quechan Indian Pass in California. The film has also reached important international audiences at the Fifth World Parks Congress in Durban, South Africa (September 2003) and the UNESCO Symposium on Conserving Sacred Natural Sites in Tokyo, Japan (May 2005).

The ethics of sacred places

In 1978, the US Congress passed the American Indian Religious Freedom Act, an acknowledgment of centuries of religious repression inflicted on Native Americans by missionaries and the US government. In the 1980s, native people tried to use the new law to protect places of ceremonial importance: sacred sites that provide them with cultural identity and spiritual sustenance. Over the next ten years they lost every single court case. The courts ruled that the new law was a policy statement with no enforcement provisions.

As a journalist and documentary filmmaker working in Native American communities, I felt a strong need to tell this story, to translate the meaning of sacred land, to clarify the culture clash, and to help give a voice to native concerns that the national media has essentially ignored. In 1990, when I decided to make a film, several Native American friends agreed to serve as advisors: the late anthropologist Alfonso Ortiz of the University of New Mexico, attorney Walter Echo-Hawk of the Native American Rights Fund, activist/author Winona LaDuke of Honor the Earth, educator and elder Jose Lucero of Santa Clara Pueblo, activist Chris Peters of Seventh Generation Fund, ethnobotanist Donna House, and author and Professor Gerald Vizenor of the University of California at Berkeley.

On the production side, Malinda Maynor, who is of Lumbee heritage from North Carolina, joined the project in 1995, the year she graduated from Stanford's film programme. The fact that Malinda is Native American turned out to be a key ingredient in getting the film done and making it a true reflection of native sensibility.

In consultation with our advisory board, we defined goals, discussed possible stories and set to work. Suddenly, I found myself, a white male outsider, asking to film sensitive, private ceremonies: because sacred places are places of ritual and prayer and how else could we tell the story? It was a crazy thing to try to do and I met a lot of resistance.

I finally told Jose Lucero, 'I just don't think I am the right person to make this film.'

'Yes, you are,' he said, 'but it will take some time.'

He was right. Though broadcast media production usually has to happen quickly and is controlled by the producer/owner, we needed to slow things down and evolve a true collaboration with the subjects of the film. We needed to engage in dialogue and practise real consultation.

I learnt that this cultural clash goes far beyond the ethics of how we as a society treat sacred places and the indigenous cultures that care for and guard them. When an outsider asks three Native American communities for permission to film intimate ceremonies and secret places, each community is put in a difficult position. Not everyone agrees on a course of action and not everyone can spend time with the filmmaker to determine if he or she is trustworthy. Those who oppose taking the risk of working with an outsider fear that, despite honest intentions, the final film might be of poor quality, or it might be distributed or used in harmful ways. The law of unintended consequences looms large when the stakes are high.

We were careful to seek out elders and activists who could assess our motives and intentions, and convey to community leaders the essential facts about who we are and what we were doing. These people are 'cultural bridges': they take risks in their own lives by investing time and energy, engaging in dialogue, translating cultural values, travelling the world, building relationships, cultivating the media, and being criticized at home for stepping outside the cultural norms of their small, tightly knit, traditional societies.

In the end, all three communities decided that the value of public education outweighed the potential damage and risks. That we were a nonprofit educational project with no commercial angles worked in our favour. Our consultations stressed the fact that the threats to sacred landscapes will not go away if the general public does not understand why sacred places are such an integral part of Native American and other indigenous cultures. Education is essential.

We made commitments as we worked that reflected our goals of environmental justice and respect for

intellectual and cultural property, and that helped us build trust. Because we were filming sensitive, often secret subjects, we promised to provide copies of all interviews for family and community archives. To ensure accuracy, we committed to review edited footage with participants at both the rough-cut and fine-cut stages. We promised to donate copies of the finished film to each of the individuals and communities we were working with. Because of the likelihood that others would want to use sensitive images from the film, we promised not to allow third parties to use any footage without further consultation and permission.

We altered the standard film release form for interviews, adding all of these commitments into the consent agreement plus a line at the bottom for me to sign, thus creating a two-way contract. Rather than us getting permission to use recorded material any way we wanted, 'in any medium ever invented forever', we committed to a process of communication, consultation and reciprocity.

We evolved a way of working, a collaboration between clashing cultures, with respect and consultation, every step of the way. It took a long time, and it was a tense process from beginning to end.

After 86-year-old Wintu medicine woman Florence Jones let us film three of her ceremonies in northern California, some time passed without the Wintu hearing from us. Several of the younger people grew concerned that we might misuse the footage, use sensitive ceremonial images to raise money, or just disappear and never be seen again. Their anxieties led to a point when it seemed we might never work with the Wintu again. But at a summer camp on the flanks of Mount Shasta, we had a long meeting where we discussed their concerns and straightened things out. We agreed to edit a film for the exclusive use of the Wintu – including all the ceremonial footage, songs and prayers in the Wintu language – which they could use internally to teach young people. Later, I was told that it was only after I started bringing my wife and two small children along on film shoots that the Wintu community began to trust me, because they saw that we shared important values.

Fig. 2 Fire ceremony

We did fulfil our promises to consult with the communities as we edited the film. In one case, we took out some sensitive black-and-white Figures at the request of the Hopi. In another, the Wintu asked us to remove a few words of a healing song they sang on Mount Shasta so that New Agers couldn't steal the song and pollute the Wintu sacred spring on the mountain. Lakota participants recommended narration changes that made the film more accurate. All of this consultation was worth the extra time it took: it saved me from doing unnecessary harm-and made *In the Light of Reverence* a far better film.

Making the film: learning new truths

Trying to translate three stories of sacred places and the people who care for them into a coherent film took ten long years. With funding from the Independent Television Service and Native American Public Telecommunications, co-producer Malinda Maynor, writer Jessica Abbe, editor Will Parrinello and I spent a year editing the 118 hours of footage down to 73 minutes. Distribution funding from the Cummings and Ford Foundations allowed us to screen the film in many places – from Native American communities to Capitol Hill and the Pentagon – and there have been many surprises along the way.

When we started making the film, we envisioned threats to sacred sites that were primarily industrial: mining, logging, mega ski resorts and more. But we found that native people are equally concerned about rock climbers who scale sacred places and New Age spiritual seekers who sing songs, beat drums, make exotic pilgrimages and hold expensive healing workshops at Native American ceremonial sites. Well-intentioned baby boomers are impacting sacred lands, too.

Another surprise had to do with the evolution of federal land management policies. For more than 100 years, the US government repressed and even outlawed native religious ceremonies. The right to practise indigenous religions in the United States actually had to be affirmed by an act of Congress. The repression officially ended in 1978 with passage of the American Indian Religious Freedom Act.

Given the long history of religious persecution, we were surprised to encounter enlightened government land managers who were struggling to incorporate respect for native traditions into official US policy. Deb Liggett, then superintendent of Devils Tower National Monument in Wyoming, brought rock climbers and Plains Indians together for two years of conversation, which created a management plan that has reduced climbing at Devils Tower by 85 per cent. Sharon Heywood, superintendent of the Shasta-Trinity National Forest in northern California, refused to permit a new ski resort on Mount Shasta after hearing native peoples' concerns about the potential impact of the proposed development on the mountain's sacred sites.

In Hopi country in northern Arizona, there also was good news at the San Francisco Peaks, home of the ancestral kachina spirits. The White Vulcan Mine, which was providing pumice to soften stone-washed jeans, was closed following an intense campaign by thirteen local tribes and the Sierra Club. Their efforts prompted former Interior Secretary Bruce Babbitt to broker a federal buy-out of the mine for US$1 million.

Yet, as narrator Peter Coyote says at the film's conclusion, 'Protections granted by federal land managers are vulnerable to shifts in the political winds.' The ascension of George W. Bush and his corporate allies has been a giant step backward in the historic struggle to protect Native American sacred places.

Fig. 3 White Vulcan mine.

Bush's assault on sacred lands

The basic problem is that American society is a 'rights society' not a 'responsibilities society.' What you've got is each individual saying, 'Well, I have a right to do this.' Having religious places, and revolving your religion around that, means you are always in contact with the earth, you're responsible for it and to it.

Vine Deloria, Jr., from In the Light of Reverence

Before a screening of *In the Light of Reverence* at Arizona State University (ASU) in early 2003, Zuni activist Cal Seciwa, the director of ASU's American Indian Institute, unfurled a canvas banner across a table (see Figure 1). It was a prototype for a billboard protesting the Salt River Project's planned 18,000 acre coal stripmine, which threatened to dry up a desert lake in New Mexico that the Zuni believe is the home of Salt Mother, an important protector spirit. The lake sits in the heart of an area known as The Sanctuary where violence is prohibited and pilgrims have gathered salt for centuries.

'We had signed a contract with Clear Channel, which owns virtually all of the billboards in Phoenix,' said Seciwa, 'and we mailed it to them with a check, but the company's president called and said they couldn't put this message on a billboard. So now freedom of speech has joined freedom of religion as a casualty of our struggle.'

Cal and I stretched the banner out and taped it to the wall of the screening room at KAET, the local public television station, which was hosting our film screening as part of a conference on 'Ethics When Cultures Clash'. The station manager walked by, looked quizzically at the banner, stopped, and a deep frown slowly appeared.

'Is there a problem?' Cal asked.
'Yeah, I think there might be,' replied the station manager.
'Kind of proves the point of this conference, doesn't it?' asked Cal.
After a long pause, the station manager said, 'You're right. Leave it up.'

While liberty hangs by a few strips of duct tape in public television stations and universities across America, it is all but dead in the corporate–government world.

The Zuni battle is one of dozens across the United States in which new permits issued by the Bush administration threaten culturally significant places, or where protections previously granted are being reversed. In many cases, administration officials hired straight from the energy industry are approving new energy extraction projects and overturning established federal policies intended to protect sacred places on public lands. The Department of the Interior (DOI) permit approving the Salt River Project coal mine near Zuni Salt Lake was championed by Steven Griles, a former mining industry lobbyist, and signed by Rebecca Watson, a long-time advocate for mining interests.

Another troubling case is Indian Pass, in the California desert, where the Clinton administration completed a six-year public process by denying a permit for Glamis Gold's cyanide heap-leach open-pit mine in an area vital to the Quechan people. The Quechan have used a network of trails and ceremonial sites there for 10,000 years. Soon after being sworn into office, Interior Secretary Gale Norton reopened the permit process for the gold mine, and though DOI and Glamis officials met numerous times before Norton's decision was announced, members of the Quechan Nation read about it in the newspaper. They were not consulted as required by law.

An incensed California Senator Barbara Boxer triggered an investigation by DOI's Inspector General when she wrote:

Secretary Norton worked previously for the Mountain States Legal Foundation, which advocates for mining

concerns; Deputy Secretary Steven Griles worked previously for the National Mining Association; Counsel to the Secretary Ann Klee worked for the American Mining Congress and is married to a partner in the law firm (Crowell and Moring) that represents Glamis Gold Ltd.; Assistant Secretary of Land and Minerals Management Rebecca Watson worked for the law firm that represents Glamis Gold Ltd. and represented at least one gold mining company; and Timothy McCrum, a member of Secretary Norton's transition team, represents Glamis Gold Ltd. and did at the time he participated on the transition team.

In March 2003, Inspector General Earl Devaney concluded, 'No undue influence or conflict of interest affected the decision-making process.' The report documented 30 contacts between the Interior Secretary's office and Glamis, including nine face-to-face meetings, and none with the Quechan.

Meanwhile, at northern California's Medicine Lake, a vision questing and ceremonial area of great importance to the Pit River Tribe, Bush administration officials in the Bureau of Land Management and Forest Service in November 2002 reversed minimal protections provided just two years earlier, and approved a geothermal power plant within one mile of the lake. Calpine Corp. is now drilling exploratory wells, and a humming industrial labyrinth of roads and transmission towers, lit twenty-four hours a day, is being planned for this remote mountainous area east of Mount Shasta. The leases were initially signed and then renewed for ten years without any government-to-government consultation, and no Environmental Impact Statement was prepared.

'Enron and others manipulated an energy crisis and Governor Davis panicked,' says Pit River activist Mickey Gemmill. 'Now, California taxpayer money is subsidizing the desecration of a place of prayer and renewal – and the electricity will go out of state!'

At Black Mesa, in northern Arizona, the world's largest coal company, Peabody Energy, announced that it intended to stop pumping 3.3 million gallons of groundwater every day along its 273 mile long coal slurry pipeline, but then Peabody applied to the Office of Surface Mining (OSM) for a permit to expand the coal stripmine and increase groundwater pumping by 32 per cent. As word spread through Hopi villages and Navajo homesteads, strong opposition mounted and OSM cancelled public hearings on the proposal. Then, in an attempt to secure an alternative water source, Arizona Senator Jon Kyl tried to attach a rider to an appropriations bill that would have authorized a new pump station on the Colorado River inside Grand Canyon National Park, and a pipeline up Jackass Canyon to Black Mesa to replace the groundwater that is being pumped into the slurryline. A firestorm of protest stopped the rider, but a water transfer scheme of some kind will undoubtedly be revived in the future.

Native activists are fighting hard. The Zuni Tribe formed a Zuni Salt Lake Coalition, and growing public pressure led the Salt River Project to drop its plans for a new coal stripmine. The Quechan Tribe worked to pass legislation in California to require backfilling and reclamation of open pit mines, as well as another state bill to protect sacred places, forcing Glamis to reevaluate the economic viability of the proposed gold mine, which is now on hold. Lakota activists at Bear Butte in South Dakota defeated a proposed rifle range that threatened to destroy the silence needed for vision quests, prayer ceremonies and sweat lodges.

The Pit River Tribe and environmental allies filed a suit challenging the validity of the leases around Medicine Lake, and convinced the Calvert Social Investment Fund to divest its holdings in Calpine. The grassroots Hopi organization Black Mesa Trust gained standing with the California Public Utilities Commission and succeeded in obtaining a ruling that will shut down the air-polluting Mohave Generating Station in southern Nevada on 31 December 2005, thereby cutting off the market for the slurryline that is depleting Hopi springs on Black Mesa.

A new Sacred Lands Protection Coalition has linked many native communities and tribal leaders in a broader resistance movement, and the coalition is expanding to include environmental and religious groups. These efforts led to a series of US Congressional Oversight Hearings in 2002/3 on threats to sacred lands. Members of the coalition are also urging Rep. Nick Rahall (D, WV) to rewrite and strengthen his Native American Sacred Lands Act (H.R. 2419) through closer consultation with tribal leaders and religious practitioners.

Other battles rage on: at the Missouri River, where Army Corps of Engineers dams and reservoirs erode cultural and burial sites of many Plains Indian tribes; at Mount Graham in Arizona, where two of seven planned telescopes have been built on the sacred peak by a consortium that includes the Catholic Church; at the Arctic National Wildlife Refuge in Alaska, where oil exploration threatens caribou calving grounds and the future of the Gwʼichin people; and at Yucca Mountain in Nevada, where a controversial nuclear waste repository is being built on Shoshone ancestral lands. The attack on sacred places goes on.

Which lens to choose?

As we shot and edited *In the Light of Reverence* we were constantly struggling with the challenge of how to tell this complex story in order to make the best film and have the greatest impact. With the goal of public education and progressive social change in mind, we developed a list of possible angles of approach and asked ourselves: Which is the best frame of reference? We considered:

* religious freedom
* protection of biological and cultural diversity
* environmental justice
* designation and management of protected areas, parks and wilderness
* historic preservation
* indigenous peoples' rights to sovereignty, intellectual property, traditional homelands.

When planning a public relations or lobbying campaign, one usually picks a single theme and focuses on it, then hones the message and sticks to it. But all of these important themes apply to the complex issue of sacred natural sites. Probing the depths of this issue involves looking through each of these lenses, because the values, social priorities and resultant responsibilities that emerge reflect the lens chosen to frame the issue of sacred places.

In the end, the documentary medium supplied our answer. Put simply, film is driven by conflict. As we edited the film and wrote draft after draft of narration, we realized it was inappropriate to try to manipulate the frame or dictate answers, and far better to simply raise questions and stimulate dialogue. We decided to focus clearly on the clash of cultures and thereby shed light on worldviews, history and sacred lands. Many viewings of the film and many discussions have led me to understand that the theme of rights and responsibilities resonates most powerfully with audiences.

Keeping the sacred in sight

Why should people care about sacred places? This struggle goes beyond environmental concerns about preserving biological and cultural diversity, extracting resources like water, coal, gold and old-growth timber, or dumping of toxic waste on the lands of indigenous people. It goes beyond the philosophical values we ascribe to religious freedom and environmental justice. It goes to our deepest need for meaning, identity and connection to home, to place, to community and to that elusive presence we call 'the sacred'.

What can each of us do to protect sacred sites? We can start by looking at the world in a new way, seeing beyond the superficial satisfactions of our commercial culture and reconnecting with what is most important in our own lives. Ask yourself, 'What places are sacred to me and to my ancestors? What do I value about the land and the place I call home?'

Many of us consider ourselves to be environmentalists, but now we have to do more: incorporate sacred land into models for sustainable economic development, and reach consensus on which places are so important to the local community that they must be protected or restored, with indigenous people at the table and directing the dialogue. The result will be a big step toward reconciliation with our history, with the earth and with native peoples.

All of creation is sacred, not just a few 'sacred places', and many others besides indigenous people feel this. We need to start living in recognition of this fact so we can protect the places we love, the land that sustains us.

Surely, our world is big enough – in geography and in spirit – to respect and protect sacred lands.

Note

Christopher (Toby) McLeod directs Earth Island Institute's Sacred Land Film Project from the Santa Cruz Mountains in California. He produced and directed the award-winning PBS film on Native American sacred places, *In the Light of Reverence* (2001). He is also a photographer and writer, and has worked with indigenous communities for twenty-five years. McLeod's other films include *The Four Corners: A National Sacrifice Area?* (1983), *Downwind/Downstream* (1988), *Poison in the Rockies* (1990), *Voices of the Land* (1990), *The Cracking of Glen Canyon Damn – With Edward Abbey and Earth First!* (1982), *Winnemem War Dance at Shasta Dam (2004) and A Thousand Years of Ceremony* (1999), which was produced as an archival film for the private use of the Winnemem Wintu community.

For more information on the Sacred Land Film Project, go to: www.sacredland.org

Fig. 4 C. McLeod filming Petrogylphs

When the mist is lifted: the unique Apatani cultural landscape, a potential candidate for World Heritage status

P. S. Ramakrishnan, School of Environmental Sciences, Jawaharlala Nehru University, India and Moji Riba, Centre for Cultural Research and Documentation, Itanagar, India

Introduction

There is now a wide recognition throughout the globe and across disciplines that regions of ecological balance exhibit a symbiotic relationship between habitats and culture. This indicates that ecology and culture have held a symbolic relationship throughout human evolution, up until the beginning of industrialization. Traditional societies (those living close to nature and natural resources), often living in natural resource-rich mountain regions of the developing tropics, interact with their surrounding ecosystems through tangible and intangible practices, these practices being determined by changing cultural perceptions, in both space and time. The concept of the 'sacred' in a cultural sense, an intangible entity, has entered the ecological paradigm not only because human societies have traditionally looked at nature with awe and reverence but also because of their strong dependence on nature to obtain their livelihood needs. The concept of the culturally valued – sacred species, sacred groves (ecosystems) and sacred landscapes (landscapes) – comes under this category (Ramakrishnan, 1996; Ramakrishnan et al., 1998).

With an exploitative viewpoint rapidly replacing the traditional value systems, which contributed towards ecosystem/landscape integrity, and the rapid homogenization of traditional human societies and the consequent social disruptions accelerated through 'global change' as an ecological phenomenon (Steffen et al., 2002), and globalization in an economic sense (Ramakrishnan, 1999), there is an urgent need today more than ever before to conserve the cultural diversity that is linked to biological diversity.

This is the context in which UNESCO's World Heritage Convention of 1972 acts as an unique international instrument for conserving cultural and natural heritage of outstanding universal value, and in which Globally Important Ingenious Agricultural Systems (GIAHS), a category recently initiated by the Food and Agriculture Organization of the UN (FAO) and of particular relevance to mountains (Ramakrishnan, 2003*a*), have to be seen. These initiatives have provided much impetus to linking cultural diversity with biological diversity, by virtue of religious, artistic or cultural associations that are of intangible value, and of the tangible livelihood benefits that traditional societies have always derived through sustainable use of natural resources, of which they always have been the custodians. The emerging paradigm shift of ecological conservation linked with sustainable development thus attempts to link ecology with economics and ethics, reaching out to a variety of disciplinary realms and contributing to the sustainability of cultural landscape heritage.

In a developing country context, much of the cultural diversity provided by traditional societies and associated biological diversity now tends to be confined to the mountain regions, and therefore linking conservation with the sustainable development of mountain regions assumes great significance. This is the context in which our efforts should be noted. They fall in the area of participatory conservation of biological diversity linked with cultural diversity, in the developing tropics in general and the Indian region in particular (Ramakrishnan, 1992, 2003*a, b,* c), and indeed that of linking these issues with the sustainable livelihood/development concerns of marginalized sections of the societies (Ramakrishnan, 1992, 2001). In such an effort, the role of knowledge systems cannot be ignored. These encompass both traditional knowledge gained through an experimental process by local communities, and formal knowledge, which is textbook-based and gained through a hypothetico-deductive process by scientists.

For this discussion we use the unique cultural landscape of the Apatanis living in Arnachal Pradesh in the north-eastern hill region of India (Kumar and Ramakrishnan, 1990) as a possible candidate for World Heritage status. Apart from rigorous research analysis we have a robust 'reach-out' initiative to involve all the stakeholders, using written media (Ramakrishnan, 2001; Ramakrishnan et al., 1995). We also use documentary productions on cultural

landscapes as a means of outreach in the programme. Two examples are documentaries on the Nanda Devi Biosphere Reserve (nominated in 2004) cultural landscape in the central Himalayan Biosphere Reserve of the same name (Rego, 2004), and on the Apatanis of Arunachal Pradesh in the north-eastern hill region of India, another unique system in its own right (Riba, 2005).

The Apatani cultural landscape

In the valley (actually a plateau at an elevation of 1,600 m) of the Subansiri district of Arunachal, in a confined land area of about 26 sq km, live about 15,000 Apatani inhabitants (the direct descendants of the first man, the Abotani).

This rice bowl in the Apatani valley of the 2,500 m high mountain slopes, is cultivated by the Nishis and the Hill Miris who practise the more vigorous *'jhum'* (shifting agriculture), and in doing so have had to fight with more aggressive natural forces in their struggle for survival. Soil and nutrient wash-out from the adjoining *jhum*-impacted hills are seen as an advantage for the wet rice cultivation in the valley, but the restricted and confined space of the valley has always been a threat to survival in the past.

The complex valley land agro-ecosystem

Though wet rice cultivation in small valleys within undulating hill formations is one of the common features of the predominantly shifting agricultural country in the north-eastern hills, which are inhabited by over a hundred different ethnic groups, the ecological and economic efficiency of these valley land systems is generally low (Ramakrishnan, 1992). In contrast, the wet rice cultivation of the Apatanis, one of the relatively advanced tribal societies in the north-eastern region of India (Furer-Haimendorf, 1962, 1985) stands out as a highly developed and unique traditional model, perfected over centuries (Kumar and Ramakrishnan, 1990), from which modern agriculture could learn many lessons in terms of sustainable management.

The way in which wet rice cultivation is managed in the Apatani village of Hari, which has a total population of 2,021, comprising 418 families with an average of five members, living in small bamboo huts, represents the typical way this complex land use system functions (Kumar and Ramakrishnan, 1990). Apatanis make effective use of their irrigated land by planting both early and late-ripening varieties of rice. The early variety is sown farther away from the village, where disturbance by animals and poorer irrigation facilities could be major constraints. Lower nutrient status on plots farther away from the village is another consideration. Thus rice plots closer to the village are nutritionally richer than those farther away. Closer to the village, where conditions are more favourable, the late variety is preferred. The fish culture practised here synchronizes well with the late-ripening rice variety. Furthermore, rice is supplemented with millet (*Eleusine coracana*), cultivated on elevated partition bunds between the rice plots, thus optimizing a diverse production system.

The early variety of rice has a higher density but a reduced basal area compared with the late variety. The economic yield per plant and per unit area of the early variety was significantly lower than for the late variety. The yield of millet per hectare of the partition bunds of rice plots was higher in plots with the early variety than in those with the late variety. The yield of fish, farmed only in conjunction with late-variety rice, was substantial.

With human labour as the major input, and men and particularly women participating, the Apatanis obtain a high energy output. The labour input for rice, or rice and millet where the early variety of rice is grown, was higher than that for the late variety of rice. The Apatanis do not use drawn animal power. The output (in both energy and economic terms) from the system, and the net return to the farmer, were higher with the late variety grown alone or with millet, than for the early variety of rice. Fish culture provides an additional output. The economic and energy efficiencies and output per labour hour were also higher under the agro-ecosystem with the late variety of rice.

The exceptionally high overall energy efficiency of this valley land agro-ecosystem – 60 to 80 units per unit energy input – is markedly different from the values for other rice systems used by other tribes in this region, which typically have an output/input ratio of between 4 and 18 units (Ramakrishnan, 1992). The high energy efficiency shown here also contrasts with that recorded for *jhum* in north-east India, which does not exceed 50. It is far superior to the traditional wet cultivation of rice of the Indian plains, which has an efficiency value of about 9 (Mitchell, 1979) and to the system used in the Philippines (Nguu and Palis, 1977). With between 27 and 35 MJ of energy output per labour hour, this system compares favourably with similar systems used in China (typically 32.8 MJ) (Dazhong and Pimentel, 1984) and with the more modern agriculture of industrialized societies (Leach, 1976), such as the United Kingdom, with an output of 40 MJ. In the present context, it is significant that human labour is a 'free' input, since it is largely obtained from within the family itself, and for specific tasks through cooperative efforts.

With successive crop harvests, in this sedentary land use system, considerable quantities of nutrients are lost through the successive harvest of crops as economic yield, and these must be replaced for sustainable land use. The wet rice agro-ecosystems of the Apatanis, like those of other tribes, are partly dependent on nutrient wash-out from the hill slopes. Recycling crop residues, use of organic wastes from the village through an elaborate network of water distribution canals, and organic residue management from the village forest lots are some of the important

measures adopted by the Apatanis for effectively sustaining soil fertility and the linked high productivity of the system.

Irrigation farming such as wet cultivation of rice requires communal work to maintain and improve the water delivery system. In the absence of a disciplined schedule and scale of water distribution among the beneficiaries, economic returns could very easily decline drastically. The Apatanis, with cooperative effort under the overall supervision of the village chief, have optimized water use along with nutrient use in their rice field.

With this highly developed wet rice cultivation, the Apatani economy is largely based on agriculture (Kumar and Ramakrishnan, 1990). Widening plots by digging adjacent higher ground down to an irrigable level seem to be a successful response to population increases and new market opportunities. The net per capita monetary return through agriculture is high. As much as 40 per cent of the rice produced is sold to the economically weaker neighbouring tribes such as the Nishis and the Hill Miris. However, the agro-ecosystem of the Apatanis could be improved through appropriate crop rotation and productive utilization of the land during the winter season. Despite these possibilities, the Apatani village ecosystem is a good example of the economic self-sufficiency of a traditional agricultural society that practises ecologically sound sedentary agriculture in the north-eastern hill region of India.

Rural forestry systems

In the life of the Apatani, bamboo as an item of utility, finds its place in all facets of life, whether it is used a house construction material or as an item of daily use (Figure 2). In the area of managing bamboo plantations as a private enterprise, a village enterprise and/or a community enterprise, the people do a professional job. Interestingly, these socially valued and ecologically significant keystone species are closely associated with the rice plots, forming a peripheral layer of the valley land (Figure 3), as part of a forestry system that the people maintain, as indicated below. Where a group of families and/or the community as a whole are involved, traditional institutions determine the access to this important resource. In managing bamboo plantations as private or as community enterprises, they have been known to use very efficient and sustainable management practices, following sustainable harvest methods.

Fig.1 Women at work, preparing the land for wet rice cultivation during the monsoon season

Even in the area of forestry activities other than bamboo, the Apatanis have elaborate institutional arrangements for their sustainable management. The Apatani valley landscape has a perimeter of layers of forest which the people maintain around the valley and along the surrounding hill slopes (Figure 3). The innermost layer of bamboo forest, surrounding the valley and closest to the rice plots, as discussed earlier, is followed by a second layer of pine plantation of timber value, followed by a third layer of *Castanopsis*, a multipurpose species that is a culturally valued and ecologically significant keystone tree, with good-quality organic litter of significance for improved soil fertility. A fourth outermost layer is a natural mixed broad-leaved forest stand, with multipurpose value for timber and non-timber forest products. With elaborate institutional arrangements for sustainability, these unique

rural forestry systems are effectively managed by the Apatanis, for self-sufficiency in forest-based resources from the limited space to which they are confined.

Ecology and culture

A significant feature of the Apatani society is the existence of many complex social and religious institutions which have helped the tribe to maintain social harmony and retain community solidarity, not only among themselves but also with members of the surrounding hill tribes. Of these, the institution of *Binii-Ajin*, with its elaborate institutional arrangements, forms the backbone to maintaining friendships not only among the members of the Apatani society, but even extending to some of the other ethnic groups such as the Nishi tribe living in the surrounding hills. The Binii-Anjin relationship is the institution through which support structures amongst all the members are ensured, and is a powerful instrument that contributes to tiding over crisis situations, as and when they arise. In a sense, an understanding of the *Binii-Ajin* relationship holds the key to understanding the complex Apatani society and its functioning. Indeed, this apart, harmonious interaction within the Apatani society, as in the case of many others in the region, is maintained through elaborate rituals, ceremonies and festivals, which have strong ecological overtones, linked with agriculture, animal husbandry or the domestic sector.

The functions of the relationship are multilayered. First there are the negotiation functions. Often a *Binii* has to represent friends in the same village and clan. At times the *Binii* may have to represent a friend in a dispute with their own family; they always attempts to come to a compromise. A society that would otherwise face conflict at every difficult inter-clan dispute manages to integrate itself through the *Binii-Ajin*. Yet it is the crisis management and support function of the *Binii* network that is most visible. In the event of an accidental fire, which is common because of the closely set houses in the Apatani village, it is the *Binii* who brings construction material, food and drink, and engages his family

and clanspeople to help in the reconstruction of the burnt house. Often this takes just three days.

Binii are made after a long period of friendship, and the relationship is given formal stature by invitations to the Myoko festival in March. This festival begins with a hunt for a wild monkey, and goes through an elaborate series of celebrations and feasting, with the erection of a sacred tree trunk of *Castanopsis*. Indeed, it is critical that the Myoko festival is fully representative of the Apatani community in its totality; at least one member from each family is expected to attend even if the family is located at a distance from the

Apatani valley land. Each member of the society is expected to bring along a *Castanopsis* twig. These are stuck together to form a vertical mat, and this is retained like a sacred shield beyond the festival season in the village centre (Figure 4).

The emotions attached to the *Binii* relationship, which is renewed during the Myoko festival, are intense. The relationship can be broken (for instance by failing to invite a *Binii* during the Myoko festival) and this is seen as something like a divorce, a break-up of hearth and home.

Maintaining social harmony is an important priority in the life of the Apatanis. When rare individual conflicts reach the village level, a *lisdu/gambu* (ritual war) is seen as an intangible benefit arising from the traditional knowledge system, with elaborate rules for arriving at a decision, and it is an interesting approach to conflict resolution. Indeed, at a global level, we could take lessons for 'global peace' from a better understanding of these diverse traditional knowledge systems, often with all their intangible benefits including their value for maintaining social harmony, an area that is receiving attention from interested political scientists.

However, with the advent of progress and the influences of modernization, the institution of the *Binii Ajin* has had to respond to the changing needs of society. The obvious things that have changed are the materials and the nature of the assistance extended in times of crisis. With the rapid urbanization of many village areas, help in kind has been replaced by help in cash. More interestingly, the *Binii Ajin* network has begun to represent a strong basis for modern political alliances during the elections to the state's assembly, or even to the modern-day village-level self-governance institutions. In addition, even the celebration of the Myoko festival (where the alliances used to be reaffirmed) has seen modifications.

Of late, the new pressures on the concept of 'tribal identity' have also meant that traditional practices and their 'preservation' have become almost a necessary expression of being 'tribal'. Institutions, especially those like the *Binii-Ajin*, have emerged as an emphatic projection of a sense of a unified 'Apatani identity'. These changes in the institution of the *Binii-Ajin* reveal just a little of the gigantic transformations that are occurring at the very base of the Apatani society, in villages far from urban centres.

Fig. 2 Bamboo plays a key role in village organization and function [left]

Fig. 3 The complex rural forestry system around the Apatani valley, a common property resource. There is an innermost layer of bamboo, followed by a layer of pine plantation, followed towards the periphery by *Castanopsis*, and an outermost layer of mixed natural forest ecosystem [middle]

Fig. 4 A vertical mat of *Castanopsis* twigs, created using contributions from different members of the Apatani society, standing as a sacred shield in the village centre where the Myoko festival was celebrated [right]

The cultural landscape as the basis for sustainable development

Traditional societies are no longer immune to changes, which constantly occur everywhere. The predominant culture of overconsumption of natural resources is damaging these societies, resulting in erosion of their time-tested value systems and traditional institutions. With social fragmentation occurring at a rapid pace and individual interests becoming dominant, community functions tend to take a back seat. Furthermore, in this era of information technology, cultural diversity is being eroded and societies are becoming increasingly homogenized.

Rehabilitation of over-exploited and/or degraded natural landscapes is an important dimension to conservation ecology. One of the most elegant examples of this effort is the manner in which cultural and spiritual values could be a major means for eliciting community participation. The concept of the 'sacred' and the traditional ecological knowledge (TEK) available with traditional societies could be seen as powerful tools for managing their natural and human-managed traditional agricultural systems (Ramakrishnan, 2003*d*). The Nepalese alder (*Alnus nepalensis*), which is a socially and culturally valued and ecological significant keystone species, with an ability to fix nitrogen in the soil and thus enable sustainable management of soil fertility, is an example of one species that has contributed to stabilizing areas of the north-east affected by shifting agriculture operating under very short *jhum* cycles (the length of the fallow period between two successive croppings on the same site) (Ramakrishnan, 1992). Such a linkage between the social selection of species and their ecological keystone value, a TEK-based principle (Ramakrishnan et al., 1998) is relevant for sustainable land-use development in areas where traditional societies live with an appropriate mix of textbook-based formal knowledge (Ramakrishnan, 2001; Ramakrishnan et al., 2005).

Castanopsis, referred to in the context of species culturally valued by the Apatanis, produces a good organic residue used for improving soil fertility, and is another example of how community and gender participation could be ensured. Many such species are to be found within and outside sacred groves and sacred landscapes. In situations, now fast developing, where biodiversity is already depleted in the landscape, socially valued and ecologically significant keystone species together with community participation could be the basis for the rehabilitation of degraded landscapes.

Being relatively inaccessible, mountains in many parts of the world are relatively rich in biodiversity and also in cultural diversity. With rapidly depleting biodiversity in the developing tropics, there is a greater realization today, more than ever before, of the value of respecting the 'sacred' as a tool towards better conservation of natural resources. The tendency and desire to rediscover the lost concept of 'cultural landscape' in the mountain systems of the developed world, as in the case of the European Alps, is indeed a step towards rediscovering lost traditions and cultural values and the associated biological diversity attached to the mountains. On the other hand, the developing tropics are struggling to sustain sociocultural heterogeneity and landscape-level diversity in their mountain systems, such as in the Himalayas, while aiming to provide a better quality of life for mountain people, based on redeveloped land-use systems centred around TEK. The concept of 'cultural landscape', often referred to as 'sacred landscape', could be used effectively for ensuring community participation in the sustainable management of natural resources.

What do these protective impulses, which often cannot be articulated by traditional societies, suggest in the contemporary context? They suggest that such impulses are deep-rooted in the psyche of these traditional societies and are often associated with TEK, refined and enriched over a long period of time. The challenge before us all, and particularly those concerned with conservation, lies in deciphering this knowledge, analysing it and linking it with the 'formal knowledge' base. In order to achieve a broader approach to conservation ecology, we need to reconcile the scientific approaches of ecology and economics with the ethics and spiritual perspective of traditional societies, lest we fall prey to the kind of anthropocentric thinking that is based on narrow disciplinary considerations. This has been the bane of the textbook-based ecological paradigm that has dominated in the past century. In the ultimate analysis, local communities should be enabled to relate to a value system that they understand and appreciate, and thereby participate in conservation linked to sustainable development. using cultural landscapes, such as that of the Apatanis, as the window.

References and further reading

Dazhong, W. and Pimental, D. 1984. Energy inputs in agricultural systems of China. *Agric. Ecosys. Environ*, No. 11, pp. 29–35.

Furer-Haimendorf, C. von. 1962. *The Apatanis and their Neighbors. A Primitive Society of the Eastern Himalayas*. London, Routledge & Keagan.

Furer-Haimendorf, C. von. 1985. *Tribals of India: The Struggle for Survival*. Delhi, Oxford University Press.

Kumar, A. and Ramakrishnan, P. S. 1990. Energy flow through an Apatani village ecosystem of Arunachal Pradesh in north-east India. *Human Ecology*, pp. 315–36.

Leach, G., 1976. Energy and food production. IPC Business Press, Guildford.

Mitchell, R. 1979. *The Analysis of Indian Agro-Ecosystems*. New Delhi, Interprint.

Nguu, N. V. and Palis, R. K. 1977. Energy input and output of a modern and traditional cultivation system in lowland rice culture. *Philippines Journal of Biology*, No. 6, pp. 1–8.

Ramakrishnan, P. S. 1992. *Shifting Agriculture and Sustainable Development: An Interdisciplinary Study from North-Eastern India*. UNESCO Man and Biosphere (MAB) Series. Carnforth, UK, Parthenon (republished by Oxford University Press, New Delhi, 1993).

Ramakrishnan, P.S. 1996. Conserving the sacred: From species to landscapes. *Nature & Resorces*, Vol. 32, pp. 11-19.

Ramakrishnan, P. S. 1999. Ecology in developing countries: The emerging paradigms. *Proc. Indian National Sci. Acad.,* 65B, pp. 51–82.

Ramakrishnan, P. S. 2001. *Ecology and Sustainable Development*. New Delhi, National Book Trust.

Ramakrishnan, P. S. 2003*a*. Globally important ingenious agricultural heritage systems (GIAHS), global change and mountain biosphere management. C. Lee and T. Schaaf (Eds.), *Global Change Research in Mountain Biosphere Reserves: Proceedings of the International Launching Workshop, Entlebuch, 10–13 November 2003*. Paris, UNESCO, pp. 132–46.

Ramakrishnan, P. S. 2003*b*. The sacred Ganga river-based cultural landscape. *Museum International* (Special Issue: The Sacred in an Interconnected World), Vol. 55, pp. 7–17.

Ramakrishnan, P. S. 2003*c*. Conserving the sacred: the protective impulse and the origins of modern protected areas. D. Harmon and A. D. Putney (Eds.), *The Full Value of Parks: From Economics to the Intangible*. Lanham, Md, Rowman and Littlefield, pp. 26–41.

Ramakrishnan, P. S. 2003*d*. The concept of sacred linked to biological resource management in the Himalayan culture. E. Ehlers and Gethmann (Eds.), *Environment Across Cultures*. Berlin, Springer-Verlag, pp. 197–204.

Ramakrishnan, P. S. 2003*e*. Biodiversity conservation: lessons from the Buddhist 'Demajong' landscape in Sikkim, India. C. Lee and T. Schaff (Eds.), *The Importance of Sacred Natural Sites for Biodiversity Conservation*. UNESCO, Paris, pp. 57–70.

Ramakrishnan, P. S., Saxena, K. G. and Chandrashekara, U. M. (Eds.). 1998. *Conserving the Sacred: For Biodiversity Management*. New Delhi, UNESCO, Oxford University Press and IBH.

Rego, C. 2004. *Invocation to the Mountain Goddess* (audio-visual documentary). Mumbai, India, Ultra Film and Video, and New Delhi, UNESCO-MAB.

Riba, M. 2005. *When the Mist is Lifted* (audio-visual documentary). Itanagar, India, Centre for Centre for Cultural Research and Documentation, and New Delhi, UNESCO-MAB.

Steffen, W., Sanderson, A., Jäger, J., Tyson, P.D., Moore III, B., Matson, P.A., Richardson, K., Oldfield, F., Schellnhuber, H-J., Turner II; B.L. and Wasson, R.J. (Eds.) 2004. Global Change and the Earth System: A Planet Under Pressure. IGBP Book Series, Springer-Verlag, Heidelberg, Germany, pp. 336.

Fig. 5 View of the Apatani landscape

Dancing for the Earth: dance, community and protected areas

Robert Wild, United Kingdom, Guillermo Rodriguez-Navarro, Corporación Caja de Herramientas, Colombia, and Claudia Cancellotti, University of Bologna, Italy

Summary

This paper examines the actual and potential role of dance in the conservation of biological and cultural resources, specifically at protected areas and sacred natural sites, using case studies as examples. Dance is a universal phenomenon and intangible heritage that is part of art and culture, communication and community expression. For some communities dance is linked to its cosmology and specific relationships with landscapes, ecosystems, animals and plants.

The subset of dances that express some relationship between people and the earth are here described as 'earth dances'. At a time when the 'archaic whisper' of the original peoples of the Earth needs to become a loud proclamation, 'earth dances' provide the potential to be a flagship of culture that can, once interpreted, provide examples of environmental ethics. Importantly, in a time of ongoing threat but also signs of indigenous renaissance they can provide a potential mechanism for an indigenous culture to strengthen its sense of community, and reinvigorate and even relearn its own environmental ethics.

Dance for the Earth and for her Peoples is an initiative aiming to use dance as a mechanism to celebrate conservation successes, raise concern at ongoing bio-cultural diversity loss and promote commitment to solving these pressing global problems.

Introduction

This paper examines the potential for using dance as a link between culture and nature, with a focus on protected areas. It looks at dance as a facet of human behaviour and explores a number of case studies where dance plays an actual or potential role in enhancing conservation for communities are living in or near national parks or other protected areas. Dance is a universal phenomenon, and dance forms are as diverse as the cultures that have created them. Dance is one element of the human repertoire of art and culture, which has unique features as a means of communication and community expression. Dance often brings meaning and expression to community across an array of human activities from the sense of the sacred, seasonal cycles, courtship and marriage to birth, death, protest and war. In traditional and non-traditional cultures dance plays a role in community integration and health. In a traditional community dance can be linked to specific relationships that community has with the landscapes and ecosystems in which it is rooted and the biota that it depends on, coexists with and exploits.

Fig. 1 Shasta and war dancers

Dance can also express environmental ideas and ethics, often using plants or animal parts in dance regalia, and mimics individual species or seasonal patterns. At a time when the deep relationships of the original peoples of the Earth need to inform what are increasingly seen as unsustainable patterns of living, 'earth dances' may provide the potential to be a flagship of culture that can, once interpreted, provide examples of environmental ethics to dominant cultures in search of sustainability. Dance along with theatre and story telling is being used in community development in many developing countries. Dance itself has become an object of conservation, and is part of what has become known as 'intangible cultural heritage' within the Convention for Safeguarding the Intangible Cultural Heritage, which is expected to come into force in August 2005 (see the article by Rieks Smeets in this volume).

In addition to an increased recognition of plural governance mechanisms for protected areas, the increasing (if patchy) respect of indigenous cultures, cultural renewal, the increasing number of international conventions related to environment and culture, the world movements for music and dance, global digital communication and the growth of sensitive nature-based and eco-tourism, are pointers that the time is ripe for a diversity of conservation efforts where the performing arts – theatre and dance – can play a significant role.

While much of the focus of this paper is to examine indigenous and local dance traditions and their relationship to nature, cultural expressions of connections to nature at protected areas are just as relevant in non-traditional/indigenous communities. The potential exists for using dance as a bridge between indigenous and non-indigenous, urban and rural, and in countries both north and south.

Protected areas, sacred natural sites and local communities

Protected areas have been a key strategy to conserve biodiversity, and the global community recently celebrated a land area in excess of 12 per cent under protection within government protected areas (GPA). By their nature protected areas are rich in biodiversity, and they are often associated with a diversity of cultures. They protect landscape and biological features of importance to specific cultures. Indigenous peoples and local communities themselves have often established protected areas, for a number of reasons, and many with a sacred dimension. Government protected areas, however, have largely been established without reference to community-established protected areas which are either unwittingly incorporated within government systems or remain hidden, ignored and outside legal protection.

The relationship between local communities and government protected area systems has often been poor, with a negative history of excluding and removing indigenous people from their land. While exclusion and eviction remain serious ongoing issues, a hoped-for better relationship between people and parks is being shaped.

Issues of governance, community-conserved areas, equity, truth and reconciliation are being aired at international meetings. At the same time the once hidden and unrecognized 'community conserved areas' (CCA), many of which are severely threatened, are now at last receiving attention. Sacred natural sites (SNS), which are or were held as sacred are a form of community-conserved area, and like other CCAs have often been overlain by government protected areas or ignored. Increasingly the sensitive and collaborative management of these sites is being called for, and the supportive protection of those that are unrecognized and threatened.

Linking the conservation of nature with the conservation of culture

Protected areas are one response to the biodiversity crisis, and the world has set itself the ambitious target of reducing the rate of biodiversity loss by 2012. At the same time we are in the midst of an extreme crisis in the loss of culture, with many languages, to take just one example, facing extinction. Increasingly cultural and biological diversity are being seen as a strongly linked, if not a common, entity, reflected by the term 'bio-cultural diversity'. It has been demonstrated that areas of highest biodiversity have some of the most diverse human cultures (Oviedo et al., 2000). It is now thought that success in the conservation of biodiversity and the conservation of culture are strongly linked, and some go further to say the conservation of culture is critical for the conservation of nature:

> In other words, that success in conserving biological diversity may well be interrelated to the maintenance of cultural diversity, and that, conversely, the loss of cultural diversity is part and parcel of the same socio-economic and political processes leading to biodiversity loss.
>
> *(Oviedo et al., 2000)*

The broader concept of protected areas including CCA and SNS adds considerable weight to this view.

Linking biodiversity and culture at the landscape level

One of the evolutions in protected area management in recent years has been the increasing attention played to the role of protected areas at the landscape level, and the function of support and buffer zones, ecological corridors and green ways to provide physical connectivity between ecological units. Landscapes are also very important

culturally: most have been modified in some way by human culture and some landscapes are almost completely culturally determined. Community ties to landscape can be very strong and much deeper than associations with single elements of biodiversity. New thinking in landscape management has emphasized the importance of moving from isolation to connection (Jongman and Pungetti, 2004). Traditional dances are often products of the landscape, and with other performing arts, can be a powerful way to strengthen a sense of connection between communities, landscape, biodiversity and protected areas.

The role of dance in human society

Before delving further into using dance for conservation, we shall briefly explore the role of dance in human society. Dance is an aspect of human behaviour that is a core area of culture. It is a mechanism of human communication and, as has been mentioned, expresses a wide range of human behaviours including ritual, invoking the sacred, celebration, courtship, marriage, marking life stages, education and in times of protest and war. As a behaviour it is not something we do all the time, but we allocate certain times and celebrations when dance is performed, and these are often times of heightened emotion.

Dancing can also be performed in a professional capacity, and the world has long traditions of professional dance, for both education and entertainment. Dance, like any part of human culture (including now digital technology) has its darker side, and expresses the profane as well as the sacred! Dance plays a central role in the celebration of fertility, both in nature and in people, and still plays a central role in courtship. Much of its darker side is related to human sexual relationships. It is this element of dance that had led it to fall foul of some religious authorities, both Christian and Islamic. In puritanical Britain in the seventeenth century, to take one example, the authorities went to the extent of banning dance along with other doubtful elements of culture such as Christmas festivities.

Dance health, community development and poverty reduction

In more recent times the value of dance for the health of individuals and communities has been recognized. Dance therapy is an alternative health practice that originated forty years ago, and there are now accredited dance therapy professionals in over twenty countries (American Dance Therapy Association; www.adta.org). Dance and movement are being used for the treatment of physical disabilities as well as psychiatric treatment.

> Dance therapy is the use of choreographed or improvised movement as a way of treating social, emotional, cognitive, and physical problems. Throughout the ages, people of many cultures have used dance to express powerful emotions, tell stories, treat illness, celebrate important events, and maintain communal bonds. Dance therapy harnesses this power of movement in a therapeutic setting and uses it to promote personal growth, health, and well-being.
>
> *www.medicomm.net, 2005*

Dance also plays a role in the well-being and strengthening of whole communities. The following information relates to the role of community dance in Britain.

> Dance is important in education, health, social cohesion and regeneration. People dance for fun, recreation, social reasons and for health. Research undertaken by the Foundation for Community Dance identified over 73,000 participatory projects, engaging over 4.7 million people in the year 2000. According to the Central Council for Physical Recreation, dance is a popular activity for 5 million participants, or 10 percent of the UK population.
>
> *Dance UK, 2005*

The use of the performing arts to promote community development is increasingly being recognized. Over the last twenty-five years there has been a growing understanding that theatre in its many forms, including drama, puppetry, storytelling and dance, is an effective tool for the communication of information across a range of actors within society, to bring about attitudinal and behavioural change, (KIT, 2005; SWT, 2005). In developing countries where communication has traditionally been oral, theatre for development has been easily accepted (KIT, 2005 and Rwangyezi, 2002). In Uganda, for example, the Uganda Development Theatre Association supports 1309 dance and drama groups across the nation. Dance and drama gives purpose, discipline and ethics to youth groups. The performance of the groups is based on local culture, and therefore stimulates its preservation, but is also a development effort and responds to the needs of the contemporary society (Rwangyezi, 2002). In Uganda dance also forms a key part of the theatre for development, and in 1997 the national dance troupe Ndere performed a play about environment and wildlife to the communities of the mountain gorilla forest national parks in the south-west of the country. Theatre for development has evolved from the top down, through participatory to internal community-generated (endogenous) forms.

Case studies of dances at protected areas

Five brief case studies explore the way that dance is important at a number of protected areas and sacred sites.

Komani San, Kgalagadi Transfrontier National Park, Kalahari, South Africa

The San are one of the first peoples of Africa. They have long been persecuted and have been reduced to a population of about 100,000 living in Southern Africa. They still face enormous challenges to maintain their culture, identity and way of life, as well as to achieve a basic standard of living. San culture is that of the hunter-gatherer, with a close relationship to the earth, where dance and music forms a central element. The music is a haunting weave of rhythms, which seems to resonate with unworldly longing. Songs and dance are often performed by hunters to thank the game they have just killed. The San use stories, music and dance to explain all that they experience in their world and to establish their relationship to it. Art for them is not separate from their life, and their life is not separate from their myths, dreams or nature (Anon, 1999). Music and dance therefore played a pivotal role in the specific socio-cultural tradition of the San people, being fundamental elements for the expression and articulation of social, ritual and spiritual life and identity.

The Komani San are the last coherent San community in South Africa. In March 1999 the South African government authorized a San land entitlement that includes six farms of 39,000 hectares, to be used for game, residential uses and/or tourism, and 25,000 hectares within the Kgalagadi Transfrontier National Park to be used as a conservation area. At present, most Komani San live in abject poverty and under very difficult and miserable conditions. Now that the land issue has largely been resolved, the Komani San community has expressed the desire to rebuild and reinforce a sense of cultural identity and cohesion as well as a common sense of purpose. As a result of the historical process, in fact, traditional knowledge in the areas of nature, health, culture, spirituality and music, has largely been lost. Apart from preserving the traditional knowledge, there is general concern amongst the entire community at the level of violence, teenage pregnancies, poor nutrition, social disruption, alcohol abuse and general lack of empowerment and self-esteem, resulting in a terrific cultural void.

In this desperate context, rehabilitation, conservation and reuse of musical and dance heritage could provide an important tool for the implementation of collective and individual physical and psychic health, improving the quality of life, rebuilding and reinforcing a communal sense of identity and self-esteem, while offering opportunities of active involvement as a concrete alternative to social deviance, violence, substance abuse, deculturation and eventually extinction. The *Dance for the Earth Initiative* is working with a project that will use dance and music as one of the elements to assist the community to rebuild and play its role as land and parks manager of the 69,000 ha land entitlement, including the contracted park area.

Ijka People, Sierra Nevada de Santa Marta, Colombia

To the indigenous Tayrona people the Sierra Nevada de Santa Marta is the heart of the earth. They have retained a very strong earth-related culture and have promoted their wisdom to the wider world. Struggling amongst civil unrest, deforestation, encroachment of their land, marginalization and discrimination they are powerfully living the ethic of the 'Law of the Mother'.

The Sierra Nevada de Santa Marta, a UNESCO Biosphere Reserve since 1979, is an isolated mountain and the world's highest coastal peak. During the last fifty years, the Sierra Nevada has suffered from degradation and deforestation. This poses a threat to approximately 1.5 million people, a large number of animal and plant species, and the future of the area's traditional indigenous cultures.

Since pre-Hispanic times, the indigenous peoples of the *Ka'sankwa* (Sacred Land), as they call the Sierra Nevada, have possessed a worldview, social organizations and living patterns revolving around the 'Law of the Mother'. This is a complex code of rules that regulates human behaviour in harmony with nature. However, this unique example of harmony between humans and their environment is beginning to fade as a result of outside intervention, drug traffickers, industrial banana and oil palm growing, guerrillas and the paramilitary.

The Tayrona believe that between man and nature there is an equilibrium, which might easily be disturbed by irresponsible human actions. This equilibrium not only refers to the management of resources such as water, forest conservation and crops, but also to the spiritual and moral balance of the individual. This balance is maintained by seasonal and agricultural rituals. The rituals, dances and ceremonies play a prominent role in their religion and agricultural practices. The indigenous people of the Sierra Nevada are working to reclaim some of their indigenous lands to make them viable for the survival of their communities, sustainable management of the land and its nature. They wish to rezone the biosphere reserve based on an indigenous zoning. The Tayrona are the founding indigenous group of the 'Dance for the Earth' Initiative, and wish to share their dances and rituals with the wider human society to bring a greater level of mutual understanding (see also Rodriquez-Navarro, this volume).

Goathland Ploughstots, North York Moors National Park, England, UK

The Goathland Village 'Ploughstots' dance, the Yorkshire Longsword Dance, is a very old tradition of English dance. Goathland is one of only three villages still dancing its own tradition. The dance is performed by men with swords, where the dance team forms a circle that weaves in and out in the manner reminiscent of an eternal knot, and at the end of the dance the swords are locked into what is

sometimes referred to as a sun symbol. The traditional day for the dance is Plough Sunday when the dance is performed around the village, and it is linked with spring ploughing. Sometimes the dance is accompanied by a mummers play, in which traditional characters act out a plot which includes death and revival considered to represent death in winter and new life in springtime.

Goathland village lies at the centre of the North York Moors National Park, one of England's national parks and a protected landscape. British traditional songs and dances, in common with many folk customs, declined from the 1500s to the 1890s. Active recording of these dance traditions, many of them linked to nature, signalled a slow recovery such that they are now widely performed by sword dance teams across the country and even internationally. The Goathland Ploughstots as an original and surviving group are a flagship for those traditions. The North York Moors National Park Authority's perspective is that it sees dance and festival as an important opportunity to celebrate and recognize the important depth and diversity of cultural heritage, which is expressed in many ways and is a distinctive special quality of the national park. It is these elements of so-called soft or intangible heritage that are most vulnerable, and need to be conserved in partnership with communities. The Authority is particularly keen to promote and develop local folk music and dance, and to that end set up in 2002, its fiftieth year, the first *Festival on the Moor*. This is now being run annually by the local community.

Prespa Lakes, Greece

The Prespa Lakes form part of an internationally important wetland (Ramsar site). After 20 years of conservation work the important bird populations of the Prespa Lakes are now secure. A traditional dance that mimics the movements of the birds has not been performed for sixty years. Can this dance be re-discovered deep in the memories of community members and revived? If so, could the dance play a role in promoting traditional land management practices in the Prespa areas? The *Dance for the Earth Initiative* is working with one of its founding partners Med-INA to find ways to bring the dance back to life.

Conservation of forest on Mount Oku, Cameroon

Bird Life International together with its local partners has been working at Mount Oku for over twenty years. Local culture and traditional leaders have played a critical role in conservation. The Bannerman's Turaco, an endangered bird species, is a totem animal found locally, and carvings of the bird form part of the ritual dance regalia of the local shamans. By linking culture and nature the project has promoted changes in forest and land management. This approach is now bearing results and after decades of decline, satellite imagery is showing signs of forest recovery.

BirdLife International has long recognized the importance of culture, and coordinates the World Festival of Birds. The *Dance for the Earth Initiative* and BirdLife International are exploring ways of working with BirdLife's eighty national partners to promote conservation through dance and culture.

Damming a culture: Winnemem Wintu, northern California

The Winnemem Wintu people have always lived along the McCloud River of northern California.
Now the few who survived the disease and destruction that accompanied the settlement of America and the tribal termination policies live miles from the McCloud River, but we return for ceremony and remembrance.
Winnemem means, 'middle water' and is the original name for the McCloud River that feeds the lake that formed by Shasta Dam. When the dam was built the lake drowned Winnemem Wintu homesteads, ancestral villages, cemeteries and numerous sacred sites.
Today, we Winnemem Wintu face a new threat to our culture. The government is considering raising the height of the dam.
Even a small increment would submerge more sacred sites and our herbal gathering grounds.
The threat to our culture and religion is so great that in September 2004 we held a *Hu'p Chonas* – a war dance ceremony on the crest of Shasta Dam. The last time we felt the need for such an action was also in defense of the river, in 1887, when our grandfathers tried to stop construction of a fish hatchery.

The *Hu'p Chonas* is a spiritual, prayerful way of showing the water and all our relations that we are still fighting for the well–being of the river. For four days and nights, we fasted and danced barefoot around a holy fire to show we are at war with our enemy the dam, not the people. The dam not only took our homelands and cemeteries, it took our salmon, now there are none, and they cannot get past the dam to their spawning beds. The fish hatchery is long gone. So are the fish. The Winnemem remain. Our goal is to restore health – to the salmon, to the river, to our people, and to our relationship with our neighbors.

Winnemem Wintu, 2004

Dance, conservation and protected areas

From the above cases it can be seen that there are practical examples where dance as an expression of culture is linked to conservation efforts at particular protected areas. We recognize that certain dances have a particularly strong

relationship to the Earth. Here we offer a definition of 'earth dances' as those dances that are inspired by nature; that tell a story of a human relationship with the Earth or a place in nature, use animal or plant parts for dance regalia, or have an underlying environmental ethic.

The lessons emanating from efforts at co-management and the study of traditional ecological knowledge, set out in the following quotes, provide an excellent rationale for the use of dance, particularly earth dances, as a flagship of culture and a communication tool for the conservation of nature.

The growing trend towards co-management arrangements with indigenous or traditional peoples offers the potential for developing and broadening this notion of parks as intercultural spaces, where differing cultural perspectives are held as equally important, management decisions are based on a profound sharing of perspectives, and interpretive programmes address these cultural perspectives with respect. It even holds the potential for bringing to the fore the archaic whisper, those incredibly eloquent tribal societies, the 'voices of the earth,' that express with such directness and simplicity the need for harmonious relationships with nature and with one another (Posey, 1999). It is this archaic whisper that calls for the barely perceptible remembrance within modern society that wants to remind us with we are part of nature, not its master, nor its steward.

Putney, 2003

The explosion of interest in traditional ecological knowledge in recent years reflects the need for ecological insights from indigenous practices of resource use, and the need to develop a new ecological ethic based in part on indigenous wisdom. By treating traditional ecological knowledge as a knowledge-practice-belief complex, it is possible to examine ecological practices and worldviews, and their dynamics, together. The main lessons of traditional ecological knowledge, as summarized here fall into three clusters: the first addresses the unity and diversity of indigenous systems: the second, the importance of participatory and community based resource management: and the third, the ethics of a sacred ecology.

Berkes, 1999

Dance associated with drama and storytelling can be a way of communicating sacred ecology, communicating the unity and diversity of indigenous stems, and bringing a wide group of players into participatory and community-based or co-management of protected areas. Dance therefore can be a way of raising up the voice of the 'elder brothers', the 'archaic whisper' of the indigenous communities and their environmental ethics, and blend these with scientific approaches to parks management, whether of government protected areas or community conserved areas.

A community that dances never dies.

Agapit Tirkey, Uraon people, India

Conclusion

We believe that dance has a supportive role in conservation activities. Dance can:

* be an integrative activity that celebrates culture, celebrates nature and brings communities together
* help a community rediscover, relearn and reintegrate its culture, including its conservation ethic
* help communities communicate within themselves and to others
* help communities adapt to dynamic socioeconomic and environmental conditions
* be a charismatic flagship of culture
* be related to environment through 'earth dances'
* be fun and celebratory.

Dance for the Earth and for her Peoples: a new initiative

The World Conservation Union (IUCN) World Commission on Protected Areas and the Commission on Environmental, Economic and Social Policy through the auspices of the Theme on Indigenous and Local Communities, Equity and Protected Areas and the Task Force on the Cultural and Spiritual Values of Protected Areas is taking forward an initiative called *Dance for the Earth and for her Peoples*. This initiative aims to use dance as a mechanism to celebrate conservation successes, raise concern at ongoing bio-cultural diversity loss and promote commitment to solving these pressing global problems.

The Dance for the Earth Initiative aims over the next five years to:

* demonstrate the effective use of dance as a tool of promoting the conservation of bio-cultural diversity at a representative selection of protected areas around the globe
* build a network of institutions, organisations and individuals interested in the 'Dance for the Earth and her Peoples' Initiative.
* develop and fund a number of dance-related projects at protected areas
* collect, record and conserve 'earth dances' from different cultures around the globe
* use a variety of media to tell the stories of communities that are conserving their resources and protected areas, through their dances.

Organizations supporting the *Dance for the Earth and for her Peoples Initiative* include BirdLife International; the Mediterranean Institute of Nature and Anthropos (Med-INA), Greece; Tayrona Indigenous Conference, Colombia; the Centre for Sustainable Development and Environment (CENESTA), Iran; World Association of Indigenous Mobile People (WAMIP); Kalpavrishk; India; Resources Africa, South Africa; African American Dance Ensemble, USA; North York Moors National Park Authority, UK; Goathland Ploughstots, UK; Ndere Troupe, Uganda and Tooro Youth Platform, Uganda.

References and further reading

Anon. 1999. San culture: culture, the artistic process and nature. With reference to *The Lost World of the Kalahari*, Laurens Van Der Post ISBN 0-14-001716-x. www.webnb.btinternet.co.uk/newpage25.htm#_Toc469496276 (Accessed 30 May 2006)

Berkes, F. 1999. *Sacred Ecology: Traditional Ecological Knowledge and Resource Management*. Philadelphia/London, Taylor and Francis.

Harmon, D. 2003. The source and significance of values in protected areas. D. Harmon and A. D. and Putney (Eds.). *The Full Value of Parks: From Economics to the Intangible*. Oxford and Lanham, Md., Rowman and Littlefield.

Harmon, D. and Putney. A.D. 2003. *The Full Value of Parks: From Economics to the Intangible*. Oxford and Lanham, Md., Rowman and Littlefield.

Jongman. R and Pungetti, G. 2004. *Ecological Networks and Greenways: Concept, Design, Implementation*. Cambridge UK, Cambridge University Press.

KIT. 2005. *Theatre and Development: An Overview*. Netherlands, Royal Tropical Institute. www.kit.nl/frameset.asp?/specials/html/td_theatre_and_development.asp&frnr=1& (Accessed 30 May 2006)

Oviedo, G., Maffi, L. and Bille Larsen, P. 2000. *Indigenous and Traditional Peoples of the World and Ecoregion Conservation: An Integrated Approach to Conserving the World's Biological and Cultural Diversity*. WWF International and Terralinga.

Posey, D.A. 1999. *Cultural and spiritual values of biodiversity*, UNEP – Intermediate Technology Publications, London, UK, pp. 732.

Rwangyezi, S. 2002. Theatre for development: a pure mockery? Paper presented during the EATI Festival, Mbarara, Uganda, 2002.

Saunders, D. A. 2004. Foreword. R. Jongman and G. Pungetti, *Ecological Networks and Greenways: Concept, Design, Implementation*. Cambridge UK, Cambridge University Press.

SWT. 2005. Small World Theatre, Arts and Culture for Development. www.smallworld.org.uk/tfd.htm (Accessed 30 May 2006)

Winnemem-Wintu, 2004. Damming a culture: the Winnemem Wintu vs. Shasta Dam. Extract from a campaign brochure. Winnemem Wintu Tribe, 14840 Bear Mountain Road, Redding, CA 96003. www.winnememwintu.us (Accessed 30 May 2006)

Summary Reports

Session 1: The phenomenon of sacred mountains: traditional worship and conservation

Chairperson: Allen Putney, IUCN
Rapporteur: Thomas Schaaf, UNESCO

Synthesis of presentations

(1) Edwin Bernbaum: Sacred mountains of the world: an overview

In this overview presentation and providing numerous examples from different world regions, such as Mount Fuji, Mount Kailas and Mount Sinai, Mr Bernbaum stated that mountains have an extraordinary power to evoke a sense of the sacred, as the highest and most impressive features of the landscape. Their imposing peaks, the clouds that gather about their summits, the dramatic play of light on their slopes, the waters that issue from their springs, their quiet places of solitude and contemplation: these and other characteristics combine to imbue them with an aura of mystery and sanctity. In that mystery and sanctity people of diverse backgrounds, both traditional and modern, experience a sense of a deeper reality that gives meaning and vitality to their lives.

(2) Makoto Motonaka: Sacred sites and pilgrimage routes in Kii Mountain Range, Japan

In Japan, a view of nature worship holds that deities dwell in natural objects throughout the universe, which has been the foundation of religious beliefs since ancient times. In this view, mountains have been closely associated with the world after death, and there is a belief that the soul of a dead person climbs a mountain on its way up to heaven. At the same time, mountains were believed to be divine homes where gods of wealth, agriculture and/or hunting dwell, probably because they are the places closest to heaven – places to which the gods could easily descend. As Japanese traditions of nature worship merged with Buddhism, which was introduced from the continent, more and more mountains came to be revered as objects of worship. In this way, mountains have played a significant role in the formation of a Japanese view of nature, which is characterized by unique approaches toward nature and its integration into various sociocultural contexts. As a concrete example, Mr Motonaka discussed the Kii Mountain Range and Pilgrimage Route, which was inscribed as a World Heritage Cultural Landscape on the World Heritage List in 2004.

(3) Cynthia Orlando: The Cardinal Direction Markers Project: sharing the creation of Earth

The Hawaii Volcanoes National Park protects the summits and rift zones of two of the world's most active volcanoes, Kilauea and Mauna Loa. But more than just the dunes, tropical rain forests, blackened lava and endangered species and ecosystem, the park is a spiritual reservoir for native Hawaiians, and a last vestige of Hawaii as it was hundreds of years ago. The park manager's task is to reconcile Hawaii's past with her future and protect the living native culture in many different ways: through the expression of chant and dance on the edge of Halema'uma'u Crater, by providing rights of access and by protecting and preserving the cultural and historic scene. The kupuna, or elders, help to appropriately communicate those values and the intangible spirit of the people of this land. This presentation discussed the role of the Kupuna Consultation Group and their spiritual guardian Pele, goddess of the volcano, as the national park collaborated with the National Museum of the American Indian on the Cardinal Direction Markers Project, an effort to remind the country and the world that the culture of Hawaii is very much alive.

(4) Masahiko Ohsawa: Sacred mountains and landscape supporting biodiversity and human life: lessons from Mount Fuji and the Himalayas

Mountains support often pristine and diverse ecosystems along steep elevation gradients, and provide both the spiritual

backbone and physical resources for human life. In this presentation, Mr Ohsawa contrasted the sacred mountain with the sacred landscape in relation to spiritual, cultural aspects of human life and biodiversity conservation. Mount Fuji, the highest and most symbolic mountain of Japan, is a typical example of a sacred mountain, which is climbed by pilgrims or worshipped from a distant place in the foothills. In contrast, the Himalayas are an area where people live and work. The harsh, unpredictable and dangerous environment forces people to rely on the deities and spirits, which are supposed to be everywhere in their surroundings. This animistic belief is strongly related to Bon, a native religion of Bhutan and Tibet. In both cases, however, mountain ecosystems are the substantial bases for human life, and local people utilize the landscape and its resources including biodiversity in sustainable ways.

(5) Anoja Wickramasinghe: Adam's Peak in the cultural landscape of Sri Lanka: evidence for an eco-cultural basis for conservation

Community stewardship is the social capital for conservation of Adam's Peak in Sri Lanka, which is considered sacred by four religions. The religions, belief system, territorial governance, sense of ownership, respect for local authority, reciprocity and collective response nurture the human–nature linkages. The local perception over the sacredness, and the governance for living in harmony were discussed in examining the eco-cultural essence for conservation. Two key challenges for the sustainable management of this sacred landscape emerge. The first is the promotion of institutional structures and mechanisms, and the second is the provision for accommodating traditional custodians and their domain of knowledge and culture as local instruments. The management of Adam's Peak – as the anchor of Sri Lanka's cultural landscape and a World Heritage site – requires an inclusive and community-based approach because its essence originates from a long-standing culture.

Conclusions

This session demonstrated well that cultural and biological diversity are particularly high in mountain ecosystems. From a biodiversity point of view, mountains are among the richest and most diverse ecosystems owing to their different vegetation zones, subject to altitude, gradient and exposition. Remoteness from highly populated lowlands and their isolation have resulted in the fact that mountains contain many rare, endangered and endemic species, giving them a high conservation value.

From a cultural perspective, mountains are often considered as areas where heaven and earth come together and where encounters between the spiritual and the secular world are possible. Being on mountain peaks offers a sense of remoteness from the profane lowlands, providing vision and enlightenment for those seeking transcendence.

The toil and hardships of climbing a mountain is often the necessary external and internal path to achieving such enlightenment. Moreover, mountains are often considered sacred as abodes of ancestors and deities. Their function as water catchments, storage and distribution areas for the lowlands give mountains an additional role for preservation in the context of food security and livelihood development at large.

Pilgrimages to mountain peaks often pose particular challenges to environmental conservation. The large masses of pilgrims climbing a mountain, often at specific seasons during the year, can result in excessive environmental degradation along pilgrimage routes. Environmental conservation managers and religious authorities need to work together to 'channel' pilgrimage routes in such a way that the environmental integrity of a sacred mountain is not jeopardized. If culture and traditional practices are considered as dynamic, new patterns can evolve by which worship of sacred mountains can be integrated with environmental conservation and even rehabilitation, for example if pilgrims are invited to plant trees along their paths while ascending a mountain.

The worldwide phenomenon of sacred mountains could be addressed in future by a comparative scientific study in all world regions so as to better understand common patterns of nature–culture interactions in the context of cultural and biological diversity.

Session 2: Sacred landscapes, biodiversity and traditional resource use

Chairperson: Gloria Pungetti, University of Reading
Rapporteur: Allen Putney, IUCN

Synthesis of presentations

(1) Guillermo E. Rodriguez-Navarro and Rogelio Mejia Izquierdo: The sacred geography of the Sierra Nevada de Santa Marta: offerings, conflict and environmental awareness

During the past fifty years, the Sierra Nevada de Santa Marta of Northern Colombia has suffered degradation and deforestation. This poses a threat to the approximately 1.5 million people who rely on its water and its biological diversity, and to the future of its traditional indigenous cultures. At present, only 18 per cent of the original forest remains and two of its thirty-five rivers have dried up.

The Sierra Nevada is shared today by a diverse set of ethnic and cultural groups, each with its own interests and values. The Sierra's population includes 32,000 members of the Kogi, Ijka, Wiwa and Kankuamo indigenous groups, which maintain their ancient traditions. There are also approximately 150,000 peasant farmers, and 1.5 million city dwellers in the lowlands. Of these, the only stable populations are the indigenous groups, and although each has their own language, they share a similar system of beliefs, social organization, and living patterns revolving around the management and conservation of this unique environment, known to them as 'the heart of the world'.

Since their first contact with the Western world, these indigenous communities have witnessed the incessant pillage and destruction of their territories, their sacred sites, burial grounds, and the customs of their ancestors. The four tribes that managed to survive are undergoing various degrees of acculturation through outside actors. Until recently, few have recognized the value of the knowledge that the indigenous people hold through their understanding of nature. Some effort is now being invested in understanding the basis for indigenous natural resource management, which indicates that the negative attitudes commonly held about indigenous knowledge have begun to change.

Ms Mejia Izquerdo, elected leader of the Ijka tribe, spoke during the Symposium indicating that the National Park, the Biosphere Reserve and the World Heritage Site that are implanted on Ijka territory should be managed by the Ijka people in accordance with the traditional belief that they and all peoples are an integral part of Mother Earth and should treat her as they treat their own bodies, with concern and respect. Given the current violence being perpetrated in their territories by guerrilla and paramilitary groups, the Ijka people propose that the area be declared a National Peace Sanctuary to be respected by all.

(2) Herwasono Soedjito: Biodiversity and cultural heritage in sacred sites of West Timor, Indonesia

An inventory of sacred natural sites (SNS) of West Timor indicates that they are both abundant and varied. A sacred document of 1,395 pages includes a section concerning the conservation of sacred sites. These sites were first recognized in 1945 when articles were written about them and their importance for the conservation of natural and cultural values. Most of the sites are in forest areas or in the mountains.

The Tan Olin area is an example of an SNS in West Timor. It contributes to the conservation of 126 tree species, but is also important for the conservation of agrobiodiversity, especially with respect to taro varieties and medicinal plants.

There are many constraints with respect to the management of the West Timor SNS. These include limited knowledge and lack of research. This is aggravated by the pressures from unsustainable development, such as the mining sector, and by logging, deforestation for agriculture and forest fires.

SNSs were found to be important for the conservation of both natural and cultural values. The study concludes that

species diversity is greater in SNSs than in surrounding areas, that they maintain a more stable microclimate, and that they are important for water production. They are also the last remaining places where some species of high economic value can be found. The study also found that there was a direct relationship between increased industrialization and increased deforestation.

(3) Lhakpa N. Sherpa: sacred hidden valleys and ecosystem conservation in the Himalayas

The concept of *beyul* or sacred hidden valleys is very important in the Himalayas. The *beyul* contain many smaller sacred sites within their boundaries. Sacred natural sites vary in their spiritual values and spatial scales. It is argued that the biodiversity conservation functions of a sacred site increases with increasing size. The large hidden valleys therefore can play an important role in the conservation of biological diversity. These larger areas can accommodate far-ranging species and the impacts of major disturbances better that smaller sites.

The *beyul* are found throughout the Himalayas where Buddhist communities exist. They are mainly inhabited by people of Buddhist origin who hold deep respect for nature. Human habitation makes the *beyul* an ideal place for managing ecosystems where people are seen as an integral component. Unfortunately, the *beyul* concept is becoming weaker. These areas are being selectively targeted for establishing protected areas without proper recognition of their role in the community and environmental conservation. Modern development, education, globalization, and tourism also do not lend support to the *beyul* concept.

There is an opportunity for advancing ecosystem conservation in the Himalayas by promoting the concept. This requires research, documentation, interpretation and education on beyuls and sacred natural sites by involving local experts and spiritual leaders.

(4) Gonzalo Oviedo and Josep Maria Mallarach: IUCN/WCPA initiatives for the protection of biodiversity-rich sacred natural sites

IUCN has launched two initiatives relating to sacred natural sites (SNS). The first is a medium-sized project, Conservation of Biodiversity-rich Sacred Natural Sites, to be funded by the Global Environment Facility (GEF), which targets SNS in developing countries. The second is the Delos Initiative which targets SNS in technologically developed countries.

The GEF project aims to create a strengthened enabling environment to support the conservation and sustainable use of biodiversity in sacred sites of indigenous and traditional peoples in developing countries. Project components include (i) increasing the level of awareness of the conservation community, including government agencies; (ii) building on the body of information and knowledge to guide appropriate action; (iii) strengthening legal and policy frameworks; (iv) improving the institutional capacity of relevant actors to undertake the required actions; and (v) broadening the availability of lessons and field-tested tools that can feed into the previous components, demonstrate success, and prove the added value of the approach.

The Delos Initiative was named after the Aegean island of Delos, a biotope with considerable marine interest, which was considered sacred in classical times, dedicated to Apollo (the god of light), and was the centre of a long-lasting alliance.

The project is designed to (1) understand the position of the major religions in developed countries on nature and on the sanctity of natural sites; (2) assess the pertinence and importance of sacred natural sites for contemporary people, and attempt to estimate the significance of their spiritual values; (3) study how these spiritual values can be maintained and enhanced, and investigate whether and how these values can be used as a tool for the conservation of sites; and (4) attempt to resolve eventual conflicts between the character of sacred sites and conservation and management requirements, establishing instead synergies, where possible.

It is expected that these two projects will be complementary to each other, and that together they will provide the inputs for the development of a publication on SNS drawing on experiences in both developed and developing countries.

(5) Parviz Koohafkan and David Boerma: Conservation and Sustainable Management of Globally Important Ingenious Agricultural Heritage Systems (GIAHS)

GIAHS is a relatively recent initiative of the international community, nested in the global endeavours to achieve sustainable development and attain the Millennium Development Goals (MDGs), with the specific goal to identify and safeguard globally important ingenious agricultural heritage systems and their associated landscapes, agricultural biodiversity and knowledge systems through mobilizing global and national recognition and support for such systems. The overall objective is to support such systems to realize their considerable actual and latent potential for enhancing global, national and local benefits (in terms of increased incomes, reduced poverty, and assured food security and nutrition) – derived through dynamic conservation, sustainable ecosystems management and enhanced productivity of such agricultural heritage systems. Currently the secretariat of the initiative is located in FAO and supporting partners include UNESCO, the

International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), the United Nations Development Programme (UNDP), GEF, the International Plant Genetics Resources Institute (IPGRI), the Roman Forum, the International Geographical Union (IGU), and governments and civil society organizations.

The overall programme goal is to establish the basis for international recognition, dynamic conservation and sustainable management of globally important ingenious agricultural heritage systems (GIAHS) and their associated biodiversity and knowledge systems throughout the world. A new category of World Heritage Sites is expected to be created with specific activity plans in from five top ten pilot sites or systems, as well as activities to leverage global, regional and national policies and institutional support. The specific objectives are to (1) enhance global understanding and recognition of GIAHS; (2) demonstrate dynamic conservation in selected globally important priority systems; and (3) promote conducive legal and policy environments and incentive structures.

The GIAHS programme is currently in a preparatory (GEF PDF-B) phase, being executed by FAO, which is expected to lead to a full project to be funded by GEF and co-financed by other sources. The programme has a potential spin-off into a much larger international endeavour over the longer term, supported by an emerging strategic partnership of multilateral and bilateral donors, national governments, civil society and CBOs. The agricultural heritage systems are unique in as much as they represent a fascinating story of people's ability and ingenuity to adjust and adapt to the vagaries of a changing physical and material environment from generation to generation, and leave indelible imprints of an abiding commitment to conservation and respect for their natural patrimony. With greater international and national understanding and awareness of such systems and their global dimension, it is expected that the GIAHS programme will evolve into a much wider effort to protect, preserve and develop these important living World Heritage systems aimed at ensuring that GIAHS become part of the global sustainable development agenda.

Conclusions

Case studies in Colombia, the Himalayas, and West Timor tend to confirm the hypothesis that sacred natural sites (SNS) serve to conserve both natural and cultural values, but also underline the fact that they are under increasing pressure.

The conservation of biological and cultural resources is often highly interrelated.

The Ijka indigenous peoples of Colombia affirm that their culture can only survive if they are able to continue to live on the land and relate to nature as they have done traditionally.

International programmes seem to be ahead of national programmes in understanding the importance of SNS for the conservation of both biological and cultural diversity. IUCN projects on SNSs are attempting to demonstrate the importance of SNS at the national level, and to develop improved legal and policy frameworks, and guidelines for the recognition and management of SNS.

Agricultural systems are often an important component of cultural landscapes and associated stewardship of biological diversity, and the FAO Initiative on Globally Important Ingenious Agricultural Heritage Systems (GIAHS) seeks to leverage international support for the identification and conservation of such systems.

Session 3: Sacred spaces and routes

Chairperson: Gonzalo Oviedo, IUCN
Rapporteur: Luohui Liang, UNU

Synthesis of presentations

(1) Kunio Iwatsuki: Sacred forests connected with the temple shrines of Japan

The traditional development of the Japanese archipelago divides the whole landscape into three distinct zones: *Hitozato*, or village areas where resident and agricultural areas are developed after forests are cut down, accounting for some 20 per cent of the entire archipelago; *Satoyama*, or the background to *Hitozato*, from where natural resources are sustainably offered to the village people, accounting for some 20 per cent of the entire archipelago; and *Okuyama*, or mountain forests where nature and wildlife are conserved, accounting for some 50 per cent of the entire archipelago. Living in these three zones, Japanese people had a lifestyle compatible with an ideal recycling system.

Japanese people are often said to be not particularly religious, but this only means that they are not deeply influenced by particular religious sects. In the true meaning of the religious mind, the presenter believes that Japanese people have a deep reverence for the gods, or nature itself. Such worship extends beyond the religious sects, and Japanese people maintain the sacred forests around the shrines and temples, naming them *Chinju-no-mori*, or forests to keep the atmosphere quiet and peaceful, especially in *Hitozato* areas. These forests form valuable landscapes for conserving biodiversity in the Japanese archipelago. When ancestors of the contemporary Japanese cut down forests to develop *Hitozato*, they left a small area to preserve the natural environment. Even in small village sites, *Chinju-no-mori* surrounding the shrines and temples are maintained, and the forests often sustain local biodiversity. Such forests are related to worship of the gods by local people, related to the shrine or to the temple, irrespective of any religious sects.

It is a pity to note that the traditional idea of the Japanese to sustain nature through worship of 8 million gods was not sustained after the so-called Meiji restoration. Observing the *Chunju-no-mori* established in the Meiji shrine, we should remember the lifestyle and the ideal recycling system performed in Japan until the Yedo dynasty.

(2) Hanta Rabetaliana: Places of the ancestors, places for conservation in Madagascar

Protected areas covered 1.7 million hectares in Madagascar in 2003. The area designated is expected to expand to cover 6 million hectares in Madagascar by the end of 2008. The majority of the potential new protected areas will be located in highlands and mountainous areas. Sacred natural sites and cultural landscapes will be part of this new generation of protected areas. Traditional and cultural values, linking people and nature, remain very strong in these mountainous areas. Therefore, the vision of the future and the government policy in Madagascar reinforce the importance of biodiversity, the sustainable use of natural resources and respect for cultural values.

The ancestors play an important role as a mediator between God and people. God is the creator and takes care of all. The ancestors link God and people. The spirits of the ancestors live in nature and can be reincarnated into water, forests and so on. Because of this, nature should be respected, it is believed in Madagascar. People still respect ancestors by praying, offering traditional gifts (steamed rice mixed with wild honey on banana leaves and traditional rum) on sacred sites before cutting trees, and carrying out slash and burn agricultural practices.

The most famous sacred mountain of Madagascar, the Ambondrombe, is still forested. It is the refuge of the Malagasy people's soul for all eighteen ethnic groups, and a symbol of the unity of the Malagasy people. The Ambondrombe is also part of an important forest corridor of about 800,000 ha of tropical forests, including two national parks in the south of the country. In April 2005 twenty-nine mayors from rural areas signed the Conservation Chart for this corridor. They

decided together to apply an integrated development conservation approach for the forest corridor initiative. The initiative has started to:

* elaborate in a participative way a Corridor Management Plan, including zoning (of strict conservation areas separate from development areas) according to the Regional Development Plan;
* identify and develop high added value activities such as production of essential oils and wild silk, and tourism;
* develop economic infrastructures, such as roads and hydropower;
* negotiate for direct payments for environmental services (as in the Kyoto Protocol) for funding the investments needed for local development:
* first step: a Local Development Fund has been set up by the Malagasy government and should help the Corridor Management Plan;
* second step (in progress): funds from international enterprises, such as Japanese enterprises, obtained through the Kyoto Protocol, should be applied to this forest corridor initiative.

In conclusion, the presenter hoped this symposium would help to show how experience could strengthen cooperation between peoples, countries and institutions. It would help with the application of international conventions, such as the Kyoto Protocol. Finally, the bodies involved reinforced their commitment to conserving cultural and biological diversity. She hoped in particular that, through the Kyoto Protocol, the project would lead to improved conservation of the forest corridor in mountainous areas, which plays a key role in water management and sustainable development.

(3) Allen Putney: Pre-feasibility study for a network of protected areas associated with the Gran Ruta Inca: an executive summary

The road system constructed during the Inca Empire in the Andes of South America is one of the marvels of antiquity. The main north–south thoroughfare, the Great Inca Highland Road, or *Gran Ruta Inca* (GRI) in Spanish and Capac *Ñan* in Quechua, is approximately 7,000 kilometres long, passing through the Andean highlands of Ecuador, Peru, Bolivia, Argentina and Chile. For local communities and visitors alike, the GRI facilitates a dialogue with the sacred in a landscape that is alive with beauty, connection and meaning. It provides a unique opportunity for promoting the sustainable development of Andean peoples, and for nurturing a transcendental experience for visitors. By conserving and managing this rich resource, the GRI could be developed for ecotourism, the revaluation of Andean culture, research, and the creation of intercultural spaces to explore values and cosmologies of the past and present.

The Andean cosmology understands nature (la *Pachamama* in Quechua) as both the material (natural resources including ecosystems, of which humans are a part) and the non-material (the sacred). It is these two intertwined aspects of nature that provide the basic building blocks for the development of individuals and society. The *Gran Ruta* is a legacy of the ancients that traversed the *Pachamama*, and thus is sacred. If managed in ways that combine the ancient wisdom of traditional knowledge, the modern notion of protected areas (especially the cultural landscape concept), and the current trend towards community-based tourism, this sacred route could lead to the recollection and revitalization of Andean culture. This cultural recollection will make possible a holistic form of sustainable development, based on human potential in the broadest sense, including the spiritual.

The GRI links peoples with their cultural and natural resources. It passes through major cities and towns, but in most such places it has been covered over or destroyed. The cultural resources associated with the GRI include both archaeological sites and living manifestations of Andean cultures, and each is found in great quantity along the GRI corridor. The natural resources associated with the GRI are typical of the high Andes mountains. There are 100 ecoregions in South America, and the GRI traverses fifteen of these. Four of them are considered to be of global importance, and another six of regional importance, for conservation purposes. The most important natural resource associated with the GRI is water.

The general objective of IUCN's *Gran Ruta Inca* Initiative is to revitalize this ancient masterwork as a unique resource. It presents an opportunity to catalyze the sustainable development of the high-Andean corridor it defines. A network of protected areas associated with the GRI will be developed. The integrated regional approach will be used. The concept of *Pas* will be applied in a broad sense to all categories, at all levels of governance (national, regional and local). The cultural landscape approach will be essential to the initiative. A major focus will be on community-based tourism where appropriate. The initiative is needed over the next five years to assure the conservation and development of the GRI, especially the priority sections, and the associated natural and cultural resources. If it is successful, new initiatives will undoubtedly be undertaken to complement those that are in progress. In the long term, the fees paid by visitors will have to meet the costs of maintaining and managing these protected areas, and assure the sustainability of the activities catalyzed.

(4) Wolde Gossa Tadesse, Metasebia Bekele and Mkko Dogisso Dosha: Southern Ethiopian sacred landscapes: the past, current status and distress

When observing and examining indigenous sacred sites in south-west Ethiopia (Gamo, Hor and Konso), one notes that sanctity is not limited to spots in the landscape but covers the landscape, with which people engage in enduring, meaningful and lively conversation. This engagement shapes their lives as well as the life of the landscape with which they associate intimately. The site/spot approach to understanding sacred landscapes reduces the significance of the indigenous conception of sanctity and land. It is argued that the landscape in general is sacred and any human engagement with the land reflects this fact. As human relations exist in, and are connected beyond, a given landscape, so do sacred landscapes extend and reproduce in continuous landscape and beyond.

The house is the most sacred place in many communities in south-west Ethiopia, and it is this sanctity that is reproduced in the wider landscape. Spaces around the homestead, in the gardens, fields, groves, stream, swamps, pastures, graveyards and common places of grieving and joy, are all sacred and have custodians, who secure the performance of seasonal and occasional rituals on these lands. Each of these landscapes is connected and has institutional structures to maintain its sustained use. We should view landscape as part of a wider system of tenure. It is the system that we have to care for in order to maintain sacred sites, rather the sites themselves in isolation. Isolating sanctity from a whole range of interconnected relations within a system will fail to contribute to maintaining biodiversity or the perpetuation of traditions.

Sacred lands in south-west Ethiopia are in distress. The main reason for this is the lack of respect for indigenous spirituality. Arrogance and the refusal of religious organizations to abide by the rule of law, and the failure of the state to protect its indigenous people and their religious practices, all contribute to this distress. In response to these threats, a cultural movement is emerging at grassroots level and at the level of academic centres, whose focus is to recapture 'the whole indigenous landscapes' and their systems of tenure.

In conclusion, sacred sites and locations as understood in south-west Ethiopia involve the whole landscape. The sacred landscape is not fixed; it reproduces and expands with time as the human encounter with nature is intensified. The landscape also shrinks when the powerful destroy systems.

(5) Alfonso Alem: Indigenous peoples' experiences in management and co-management of their territories: the Bolivian case

Bolivia, a landlocked country in the middle of South America, with a surface of 1,100,000 sq km and a population of 9 million, has one of the most contrasting natural settings and degrees of cultural diversity of any country in the world. There are three major regions: the lowlands, the inter-Andean valleys, and the highlands and the Andes. Twenty-three ecoregions make Bolivia one of the most ecoregion-diverse countries in the world. On the other hand, 70 per cent of the population belongs to one of the thirty-five indigenous groups, the large majority being Aymaras and Quechuas. These peoples can be traced back to the pre-Columbian cultures of South America. This makes Bolivia unique even on the subcontinent.

Since the pre-Inca period, the Andean cultures have developed management systems with a maximum of vertical ecological zones. These systems allow them to diversify their limited highlands diet and economy into rich and sophisticated practices. They also developed an extended network of intercultural relations. Even weakened, those systems, experiences and knowledge are still alive among the current descendants of these ancient peoples and cultures.

The state institutions and the ruling sectors of society have dispossessed and marginalized the indigenous majority of the population. Despite the prevalent neo-colonial structure there have been some changes at all levels over the last few years that have enabled the indigenous majority to become part of the decision-making processes: for example, in the preparation for the Constituent Assembly next year.

Over the last twenty-five years Bolivia has been working on the definition of a national strategy in biodiversity conservation, moving from a western-outsider approach, which focuses on the aspects of nature, to a cultural approach, which includes local communities, consisting mostly of indigenous people, in the management of protected areas, which cover 17 per cent of the country's territory. Most of Bolivia's parks are inhabited and at least half of them have a relevant presence of indigenous communities. In many cases, co-management committees have been established, and in many others, local communities are claiming to do the same. In a few cases management plans have acknowledged areas of cultural significance within the parks, but this situation is still far from being the norm.

From 1994 onwards, when a constitutional amendment acknowledged indigenous peoples' territorial and other collective rights, more than 7 million ha have been legally registered in favour of most of the indigenous peoples, particularly from the lowlands, through the new legal category of community lands of origin (TCO). Currently more than fifty claims are being processed by the Agrarian Reform Institute (INRA), concerning around 40 million ha, as a part of the global clearance process of establishing legal title to land. All TCOs must adopt a zoning of their territories and a management plan. Even though this process is very new, many of them have already accomplished the requirements, and

in all of these cases, a cultural approach has been essential. In most cases, the allegation of existence of sacred places has been considered in the processes of recognizing the communities' rights to their ancestral territories.

Bolivia is living in an exceptional moment of challenge. The government will need to deal with the nationwide appraisal of indigenous peoples' conscience about their rights as well as the resistance of those sectors that can not keep their historic privileges any more.

Conclusions

Cosmology: the sacred dimension of the broad landscape

The notion on sacred space covers cultural landscapes, including agricultural fields and other elements. However, there are specific places for ritual practices, which have special importance. There are three distinct zones in the Japanese landscape: *Hitozato* (village and agricultural areas), *Satoyama* (managed forests) and *Okuyama* (primary forests). Nature is understood in the Andes in both material (resources) and non-material (sacred) terms. Ancestors' spirits in the mountain of Madagascar link humans and the supernatural world. The sacred aspect of the whole rural landscape is well demonstrated in the case study from south-west Ethiopia (covering homesteads, footpaths, markets, streams, fields and so on).

Connectedness of the sacred landscape with traditional culture and livelihoods

Three zones are integrated in Japan and linked with traditional worship of nature. The cultural dimension of the landscape in the Andes includes complex management of livelihoods and cultural relationships. Sacred space and place make sense only in the context of local livelihoods and institutions in south-west Ethiopia. In Madagascar, the ancestors' spirits are a cultural link to livelihoods, because people use natural resources through their mediation.

Responses for management of sacred spaces

The sacredness of the landscape leads to protection of key ecosystems, which provide goods and services fundamental for people's livelihoods and culture. The integration of worship with nature in land use planning reinforces the traditional culture and sustains livelihoods. The response proposes that the sacred dimension of the landscape be 'recollected' through GRI, and the cultural approach to protected areas is emphasized in Bolivia. Traditional beliefs must be respected and safeguarded from external forces in south-west Ethiopia. Respect for ancestral places and cultural values has the potential to contribute to the national system of protected areas in Madagascar.

Session 4: Water, culture and biodiversity

Chairperson: Fekri Hassan, University College London
Rapporteur: Alexander Otte, UNESCO

Synthesis of presentations

(1) Jim Enote: Indigenous mapping of sacred water

Jim Enote presented the experience of mapping of water resources and sacred places from the point of view of the Zuni people of New Mexico and of several other indigenous groups, including native Alaskans and Hawaiians. Based on the scarcity of water in his region, he pointed out the importance that this resource had for his people, and also for other indigenous communities living in the United States of America. Water provides the umbilical cord linking them to the universe and to their ancestors, and among others, this information is included in the traditional way of mapping the environment. These maps may consist of drawings, objects or even songs, and they may contain hidden or secret information about the places they describe. Such maps have been made and used for as long as these communities have existed. However, for the last 500 years the territories have been remapped, using the cartographic-geographical approach brought to North America by colonists. In this way, the Native Americans were dispossessed of their territories and water resources, since the traditional maps were no longer recognized as a valid claim or description of the landscapes. This trend needs to be reversed through the (re)creation of traditional maps.

Today, the indigenous communities discuss the validity of the traditional ways of mapping versus mapping with computerized tools. By any means it is necessary to maintain the native languages used to create such maps, if the knowledge of the communities' territories and resources is to be preserved. This knowledge is vital to the identity of the tribes, as it places them in the physical and spiritual universe, and empowers them to conduct their life. The maps not only indicate resources that occur in the environment, but may also include information on the biota. They can thus describe the limits of wildlife refuges and could be of use for conservation specialists.

Mapping constitutes a powerful tool that, wisely used and recognized by the authorities, can help to recover land that was lost through 'remapping'. However, mapping also bears dangers, as a claim may be turned against a community, or may create conflicts through territorial overlaps or differences of interest. Furthermore, the mapping of sacred places could also lead to accelerated desacralization, if such maps permit public access. In this sense the audience discussed how to protect the intellectual property of the traditional maps. The wise use of traditional maps may therefore include the omission of certain information, and in particular, must be based on confidence and trustful dialogue with the legal authorities and the public accessing the mapped territories.

(2) Jorge Recharte: Sacred lakes and springs in the northern Andes and the Huascarán World Heritage Site and Biosphere Reserve, Peru

Jorge Recharte described two case studies in the alpine regions of the northern Andes, one in the Piura region, the other in Huascarán. These humid alpine ecosystems of the Andes are characterized by a high endemic biodiversity and a key role in the regulation of the hydrological cycle. The origin of water in the summits is associated with the magic origins of domestic animals and healing powers; and the cultural definition of the 'wild' is connected with the 'sacred'. Both examples are of remote places that are associated with the origin of water, the non-use by humans and spiritual powers.

In the Piura, the humid alpine grassland (*paramo*), the cultural definition of the 'wild' plays a key role. These uninhabited places are held sacred. Rituals take place in its lakes, waterfalls and wetlands. Remoteness, purity and non-use are associated with spiritual and healing powers. The regions are therefore not used for agriculture. Shamans and common visit

those areas for the collection of plants and ceremonies of healing. There is great potential to develop conservation strategies on the basis of the notion of the sacred and the wilderness.

In the second case, Huascarán, the remote 'wilderness', its glaciers, water bodies and forests are associated with spiritual powers of wild ancestors. They may be safely approached only by the initiated shaman, and are opposed to the valleys where human domestic human life resides.

In both cases, the traditions are now in competition with the need and desire for a better livelihood. In this setting, the challenge is to combine development with safeguarding the sacredness that guarantees the protection of water resources, biodiversity and traditional medicine. In order to maintain the integrity of the people's traditions, it is crucial to identify the right social processes and support their leadership in conservation.

(3) Lye M. Yoka: The Congo River through various founding myths

Lye Yoka presented an overview of the myths, legends and oral traditions of the Congo River basin. According to the popular myth, God, after having forgotten to create the country, formed the Congo on the last day of creation by assembling the leftovers of the universe around a great river. He populated the area around the river with men and women speaking many different languages and customs. The very high floral and faunal biodiversity in the region is also rooted in this myth of a random creation.

However, since the creation was incomplete, the peoples of the Congo are in an unfinished search for identity and peace. The history of the country mirrors this paradox. In the late twentieth century, the axis of the great river was politically interpreted as the backbone of national unity and a means for economic development. The recent war had catastrophic consequences for the peoples of the Congo basin. It has also endangered the biodiversity of the area, for example through poaching of rare species of plants and animals. Furthermore, it has revived practices of fetishism, including ablution with water that supposedly protects against bullets. However, the actual after-war period has seen a greater attention afforded to cultural and natural heritage, and traditional knowledge of the Congo. The link between the nature and culture of the river serves as a means to achieve a balanced management of the resources and ecosystems, and to establish a culture of peace.

Oral literature, for example the numerous regional proverbs, serves to transmit traditional ecological knowledge and communicate it among the communities. The popular myth of the common origin of human beings and the bonobo primate is known among all people of the Congo. For this reason, the bonobo is the only monkey not eaten as meat. Finally, the waters of the Congo River flowing together to the sea serve as a deeply rooted metaphor of the human condition and common identity of the people living in its basin. As discussed with the audience, because of the physical and spiritual link, and the communication network provided by the river, all communities of the Congo basin share this consciousness.

(4) Gulanara Aitpaeva: The phenomenon of sacred sites in Kyrgyzstan: interweaving of mythology and reality

Gulanara Aitpaeva's presentation on the sacred sites in Kyrgyzstan covered both sites of natural origin like springs, mountains, gorges, stones, trees, lakes and caves, and human-created sites, such as burial grounds of prominent persons and ancient buildings. Sacred sites are numerous in Kyrgyzstan and usually called *Mazar*. They are firmly anchored in the popular culture and yet not much researched. The study presented here concentrated on the Talas Oblast (province), counting 225 such sites. They are visited by many people of all social backgrounds in order to improve their health, family well-being and out of an internal felt need. Such visits can be accompanied by sacrifices, rituals called *Tuloo*. The idea of interrelationship and mutual responsibility of the past and present, dead and alive, ancestors and descendants underlies the ritual of *Tuloo*. *Tuloo* is an act that connects opposite worlds and spheres. The well-being of the living is achieved with the help of forefathers' spirits, but for that the spirits must feel the memory and respect of the alive.

Traditionally, *Mazars* are visited by both professional healers and laypeople. Professional healers reinforce what is known as *kyrgyzchylyk*, a diverse spectrum of extrasensory abilities at the heart of their vocation. In the context of great poverty in this region, the *Mazar* provide an inexpensive and convenient means of popular healthcare that is equally open to all. Since 1991, they also reinforce the identity of the Kyrgyz people. This creates some religious tensions.

In the discussion with the audience, Ms Aitpaeva underlined that the natural features of the *Mazar*, such as great trees for example, are particularly protected through their sociocultural function. In general, the *Mazar* are cared for by the population. The ecological aspects of the *Mazar* deserve further investigation.

Conclusions

One of the main issues was the importance of sacred water sites in healing as a source of spiritual and emotional energy to the community, as stated by Ms Aitpaeva, and in reference to the spiritual power of water which is perceived as positive and associated to healing, as mentioned by Mr Recharte.

Mr Recharte further stated that the origin of water in the Andean alpine summits is associated with the magic origins of domestic animals and healing powers. This raises a point concerning the objectives of conservation, and the specific role of sacred natural sites and cultural landscapes in conservation. In addition to the role of such sites in healing, which is beneficial to the local and indigenous communities, we must also define other needs that sacred sites do and could fulfil, such as subsistence and resilience for local and indigenous communities, and the needs the sacred sites could fulfil on national and international scales, especially if water is to be regarded as a sacred substance that can unite communities from different parts of the world, and in making sacred water places spaces for effective dialogue between indigenous and other communities.

It also became clear, as in the case of the*Mazars* in Kyrgyzstan, that there are conflicting spiritual belief systems that pose a threat to the practices that define and sustain sacred places. This leads us to call attention to the need for means by which such conflicts may be resolved.

Jorge Recharte also alerts us to the role of sacred natural sites in mobilizing conservation actions. This leads us to the contribution by Mr Motonaka concerning the institutional system of protection for the Kii Mountain range in Japan, which could be used as a showcase for how to combine national, regional and international efforts for the protection of sacred natural sites and cultural landscapes (see Summary Report: Session 1).

In this regard it is also important to note Mr Yoka's presentation on the role of indigenous myths (or indigenous discourse) and practices as a means of achieving a balanced management of natural resources and in maintaining a culture of peace, especially at times of war and conflict.

In our discussion, the need to integrate traditional and scientific knowledge was highlighted. This issues became clear in the presentation by Mr Enote, who showed that non-indigenous mapping of water resources and sacred places in North America had contributed to dispossessing indigenous communities of their territories, and even more significantly dispossessing indigenous peoples of their cultures. He noted however that, if mapping is used wisely, it can help to recover land and rehabilitate the well-being of the communities. The issue here is thus what kind of mapping should be applied and who should participate in the mapping activity. Perhaps new information technologies such as GIS, with its potential for accommodating a variety of information layers, including multiple names for the same sacred place, and different media from video clips to music, could be useful in this regard.

Finally, the mention of the healing powers of water and wild animals and plants brings into focus the source of our sense of the sacred, and the fact that this sense is derived not from an abstract space but from its constitutive substances and elements, such as water, plants, animals and geological features. This in turn draws our attention to the importance of water as a principal substance of the sacred; and to awareness that the sacred transcends space and time.

Session 5: Water uses in cultural landscapes

Chairperson: Jim Enote, A:shiwi A:wan Museum and Heritage Center
Rapporteur: Lisa Hiwasaki, UNESCO

Synthesis of presentations

(1) Octaviana V. Trujillo: The Sacred Sites and Gathering Grounds Initiative: strategies for protecting traditional native pålaces on federal, state and private lands

Octaviana V. Trujillo began the session by describing the Sacred Sites and Gathering Grounds Initiative. This is a project that (1) highlights success stories where indigenous peoples have utilized diverse strategies and means to achieve access to and protection of sacred sites and traditional use areas; and (2) makes this knowledge available to indigenous communities in a 'toolkit' format for them to utilize in their own efforts to continue preserving sacred sites and traditional gathering grounds. The project has also helped the Applied Indigenous Studies Department at Northern Arizona University to develop curricula around the overall topic.

From the initial research and planning stages, this project has involved a wide range of academic expertise as well as native practitioners, tribal government administrators and staff. It is hoped that through this project, enduring and valuable relationships among indigenous peoples engaged in widely differing approaches to sacred site protection across the world will be developed.

(2) Fekri Hassan: Water and civilization: managing our sacred world water heritage

Fekri Hassan began his presentation by underlying the importance of water as an integral element of all sacred sites and cultural landscapes, and highlighting the role water could play in generating a mutual understating of shared human experiences. Bringing in examples from Asia and Europe, he discussed the concept of 'Water World Heritage Sites' that could serve as a vital resource for promoting ethical and sacred values, and as platforms for education and model management practices and strategies. Water Heritage Sites, however, face some threats such as pollution, tourism, dams and toxic wastes from mining. In order to mitigate such damage, Mr Hassan suggests that there is a need for a review of such impacts in World Heritage Sites, with specific guidelines for action. Such a review would require the active engagement of indigenous people, support of indigenous communities by valorizing traditional knowledge, and support of new conservation technologies in conjunction with traditional knowledge. There is also the need to develop an integrated and dynamic management strategy, to develop partnerships for monitoring and mitigation, and to promote ethical values. Mr Hassan closed his presentation by stating that to guard sacred water sites is to guard our own sense of humanity.

(3) Koichi Kaizawa: Rivers and the Ainu people

Koichi Kaizawa began by describing two dam projects close to his hometown of Biratori, and their implications for the Ainu people. The construction of Nibutani Dam, completed in 1998, triggered a court case that resulted in a significant ruling that acknowledged the Ainu as indigenous people and stated that the government failed to assess the effect of the dam on Ainu culture. It is against such a background that the Ainu Culture Preservation Research Project was begun, with the involvement of Ainu people, with which Mr Kaizawa is involved. This research is unique in that it is the first social impact assessment of Ainu culture, with active Ainu participation. The mid-term report of this research has recently been completed.

Mr Kaizawa closed his presentation by discussing the problem of Shiretoko, which has been nominated as a World Heritage Site but no Ainu consultation has taken place in discussions leading up to the nomination. He appealed to the participants about the need to consider the appropriateness of building a dam in Nibutani, a place with many

archaeological remains, cultural artefacts and rich natural resources, a place which is also worthy of being recognized as a World Heritage Site.

(4) Teddy Baguilat: Rice terraces of the Philippine Cordilleras, Philippines

Teddy Baguilat discussed the various values of the Ifugao rice terraces in the Philippine Cordilleras, such as food production, ecotourism, soil and water conservation, and community pride and identity. He described how the rice terraces are made, at the same time describing their importance in land use, namely water catchment, as a water filter and slope stabilizer. The rice terraces also help to manage water by regulating water flow, distribution, drainage, and sealing of water. Although watershed management is the key to maintaining the lifeline of the terraces, development trends threaten the terraces, such as modern engineering systems, modern farming systems and the destruction of surrounding watersheds. The challenge is to work with the various government and international agencies to find a healthy compromise between modernization and traditional knowledge systems. Mr Baguilat concluded his presentation by stating that the foundation of any management system should be based in local knowledge.

(5) Bas Verschuuren: Sociocultural importance of wetlands in northern Australia

Bas Verschuuren stressed that although wetlands provide many goods and services to people, ecological, economic and sociocultural, they are often undervalued. In particular, the sociocultural importance of wetlands is often ignored, and there currently exists no framework to assess the social and cultural importance of wetlands, such as human health, cultural heritage, spiritual and existence value, inspiration and expression, knowledge, sense of place, aesthetic quality, tourism and recreation, and peace and reconciliation. Mr Verschuuren then described the case of wetlands in north Australia, where the different stakeholders make different uses of water and hold different sociocultural values related to water and land. He then pointed out the problem that although sacred sites, land rights and native title based on spiritual relationship to land are legally recognized, water is not.

From this example, Mr Verschuuren drew out the challenges that remain: namely, the need for the application of appropriate guidelines and methodologies to assess the sociocultural importance of wetlands; setting management methods and policy instruments that facilitate integration of sociocultural importance; and facilitating equitable trade-offs and compensation mechanisms between intangible values and development, conservation and poverty alleviation.

Following the five presentations, the floor was opened for discussion. The issues discussed included the problem mentioned by Mr Kaizawa, namely, the lack of Ainu consultation in the nomination of Shiretoko as a World Heritage Site; and the issue of science and technology as opposed to traditional knowledge, namely, how to find the appropriate mix of traditional and formal knowledge and technologies in water management.

Conclusions

Session 5 benefited from the detailed and informative presentations from the five presenters as well as those of the previous session, Session 4: Water, culture and biodiversity. Two things that should come out of this session are first, the importance of water to us, in both sacred and everyday realms; and second, the necessity of involvement of all stakeholders, in particular indigenous and local people, in managing water resources.

Fekri Hassan's presentation gave a general overview with case studies across the world, which demonstrated the importance of water in the religious and sacred realms. As Mr Hassan put it, guarding sacred water sites is to guard our own sense of humanity. But as the case of the rice terraces in the Philippines by Teddy Baguilat demonstrated, water is vital for our everyday lives and in particular in the management of water resources and land. Presentations by Koichi Kaizawa and Bas Verschuuren showed how different indigenous communities bestow cultural values on rivers and wetlands.

Precisely because of this diversity in water usages and how such usages manifest themselves, the importance of adopting multi-stakeholder approaches – in particular securing participation of indigenous people in the management of water resources – has become eminently clear. The development of the Sacred Sites and Gathering Grounds Initiative in Arizona presented by Ms Trujillo, and the Ainu Culture Preservation Research in Hokkaido, are good examples of how such a process could be realized. There is much that we could learn from such endeavours to include indigenous peoples.

Session 6: Food security and livelihoods: threats and opportunities of sacred natural sites

Chairperson: Parviz Koohafkan, FAO
Rapporteur: Maharaj Muthoo, Roman Forum

Synthesis of presentations

(1) Anthony Githitho: The sacred Mijikenda Kayas of coastal Kenya: evolving management principles and guidelines

The presentation by Mr Githitho on the Sacred Mijikenda *Kaya* forests, Kenya, sought the development of national guidelines for *Kaya* conservation in line with those of UNESCO, taking account of three key values: culture, natural biodiversity and natural resources. Outsiders and visitors can be a threat; *Kaya* means 'home' and visitors should either be invited or perceive to be invitees, observing local rules and restricting *Kaya* forest utilization to rituals.

(2) Nadezhda Cherenkova: The status of the Solovetsky archipelago in the UNESCO World Heritage List

An excellent brochure has been prepared especially for the symposium, and the presentation by Ms Cherenkova displayed the exceptional beauty and richly diverse biological and cultural heritage of the islands, such as whales, birds, fish ponds, monasteries and hermitages. There are cultural and natural value linkages and it is indeed a mixed site, which merits being renominated as a World Heritage Site for UNESCO's consideration.

(3) Lawrence Foana'ota: The cultural landscape value of East Rennell World Heritage site, Rennell and Bellona Province, Solomon Islands

Mr Foana'ota explained that this first World Heritage Site in the Pacific (other than Australia and New Zealand) is a natural site with its culture shaped by its environmental and ecological surroundings. Techniques and traditional knowledge have been developed for using and safeguarding local resources for food security, livelihoods and spiritual purpose. Traditional environmental knowledge (TEK) has evolved regarding land, sea, weather, food and life at large, including transport within and across islands. Despite the development of powered canoes, which might be inimical to tradition, the cultural and natural diversity are intact, and any future threat could arise from lifestyle changes.

(4) Luohui Liang: GIAHS study in China

The globally important ingenious agricultural heritage systems (GIAHS) study in China presented by Mr Liang clarified that agriculture provides environmental services and does not impact biodiversity negatively. Instead, agricultural landscapes enrich biodiversity through synergistic management of land, water and crops, and farmers adapt to local ecosystem situations and appropriate crop cycling. In the rice–fish system, intercropping and hybrids with traditional systems contribute to diversity. Ninety percent of the world's rice fields are flooded systems, so that mixing rice cultivation with fish farming is natural and opportune, as has been traditionally practised in China and elsewhere, providing food security and balanced nutrition. The food–fish web is an integrated system with multiple socio-economic benefits, and natural control of weeds and soil fertilization. The threats arise from increasing labour costs and the risk of fish theft, and more so from external pressures and non-renewable inputs.

(5) Maharaj Muthoo: Environment, development and poverty eradication with special reference to globally important and ingenious agricultural systems (GIAHS)

Mr Muthoo made a presentation on GIAHS systems with special reference to saffron in Kashmir. He briefly explained GIAHS as an innovative opportunity to safeguard the 'sacred' sites that provide food, shelter and sustainable livelihoods to 890 million rural poor dependent on GIAHS agriculture. But the priceless human heritage of GIAHS is at risk from being diluted, degraded and lost forever, not least by unbalanced globalization. He made a passionate presentation of the unique saffron site, over 2,000 years old, in the beautiful Kashmir valley, yielding the most expensive and exclusive spice, cultivated by traditional farmer families, and linked to cuisine, medicine, romance and religion. Yet it is threatened by industrialized cultivation elsewhere of high-yielding saffron varieties which can not match the Kashmir Royal Saffron quality and culture.

Conclusions

The presentations emphasized the importance of agricultural heritage systems from the perspective of food and livelihood security, biological diversity for food and agriculture, traditional knowledge of natural resources management landscape diversity and the link between culture and agriculture. The threats to these systems and opportunities for their conservation and sustainable management were also analysed.

The presentations highlighted the close nexus between diverse traditional farming and land use practices, biodiversity conservation and sustainable livelihoods, and called for the GIAHS framework to be adopted to safeguard these agriculture and related practices, which are facing the threats and challenges of fast-paced industrializing agricultural and globalization processes.

Session 7: Linking tangible and intangible heritage

Chairperson: Edwin Bernbaum, The Mountain Institute
Rapporteur: Mechtild Rössler, UNESCO

Synthesis of presentations

(1) Rieks Smeets: Sacred sites as cultural spaces

Mr Smeets provided the background and an introduction to the 2003 UNESCO Convention on the Safeguarding of the Intangible Cultural Heritage, and explained the notion of cultural space, not yet defined under this Convention; He further referred to another definition that had been prepared for the Masterpieces programme. He then defined cultural space as location for manifestations or transmissions of the intangible heritage of communities (which could be temporal, human-made or natural). These spaces could be either Biosphere Reserves or World Heritage Sites.

He further referred to the characteristics that are transmitted from generation to generation, with language as a vector: performing arts, social practices and craftsmanship. He also explained the structure of the operations of the 2003 Convention, with a General Assembly Committee, Secretariat and Operational Directives, and stated that the concept of authenticity was questioned.

(2) Elias Mujica: Cultural landscapes and the challenges of biodiversity conservation in the Andean Region of Latin America

Mr Mujica stated that the relationship between tangible and intangible heritage was crucial, and that making linkages was the key work. He informed the participants about his work in the Andes, focusing on the cultural landscapes shaped by altitudinal ranges, vegetation, water sources and relief in the high Andes. This harsh environment, ecologically fragile, led people and communities to develop new strategies for sustainable livelihoods, including a high diversity of species (corn and potato hot-spots) and land-use techniques associated with rituals and belief systems.

He presented two different case studies. First was the Colca Valley, one of the deepest on Earth, with plant and animal domestication over the centuries and demonstrating remarkable achievements by the people, who are now marginalized. In former times it was the centre of agricultural production of the Inca Empire, and traces are still visible of terraces from this period. Rituals are rooted in the environment, dances and rituals to celebrate Mother Earth. The other example was the World Heritage site of Quebrada de Humahuaca, which follows a major cultural route, the Camino Inca in Argentina.

(3) Pei Shengji: Biodiversity in sacred groves of Xishuangbanna Biosphere Reserve, China

Pei Shengji introduced his work on sacred groves, which provide for a high species diversity protected by cultural and belief systems over centuries in south-west China, a region where several ethnic groups reside. Sacred natural sites have been recently acknowledged as protected areas by the provincial government. This illustrates the importance of such projects for decision-makers. He stated that traditional practices play a key role in the conservation of biodiversity, and informed the audience that the authorities of Yunnan Province were now considering granting a special protected area status to sacred groves in this area.

(4) Edward M. Telly: Sacred Groves, rituals and sustainable community development in Ghana

Mr Telly highlighted a different example from northern Ghana in Africa, based on a scientific research project focusing on sustainable community development and natural resource use in connection with sacred groves. These sacred groves are well protected by traditional belief systems, although they are subject to the influences of Islam and Christianity. He informed the audience of the various sacred groves where the Environmental Protection Agency of Ghana and UNESCO have carried out in-

depth studies inventorying biological diversity, environmental conservation and socio-economic development.

(5) Phillip Segadika: Tsodilo, a cultural landscape in the Kalahari (Botswana), symbolic and religious significance

Mr Segadika presented the case of Tsodilo, the first World Heritage Site inscribed in Botswana in 2001, with 4,500 rock art paintings. It is also called the 'Louvre of the Kalahari Desert'. The site has been protected as a spiritual and ritual place, and space for worshipping ancestors. At the same time it illustrates the human–environmental interactions over the past 100,000 years. The two communities, with a total of 200 Bushmen people, relate the same sites with different stories. The interpretative centre is also a platform for intangible heritage. Mr Segadika also explained some of the challenges faced, including graffiti and the day-to-day management of the site.

(6) Noriko Aikawa: UNESCO Masterpieces of the Oral and Intangible Heritage of Humanity: some examples closely related to nature

Ms Aikawa presented a film extract of the UNESCO Masterpieces Programme, with examples of intangible heritage related to nature and the universe, including sand paintings from Vanuatu and body paint processes from Brazil. These illustrated the rich and diverse knowledge of indigenous people of the different plant species and their properties.

Conclusions

The session provided a fascinating background for, and overview of, the new challenges of the UNESCO Convention for the Intangible Heritage, adopted in 2003 and soon to be ratified by thirty countries, which marked its coming into force. It provides new opportunities for indigenous people and local communities to ensure that their heritage is recognized and that safeguarding and capacity-building measures are undertaken. This is going beyond the Masterpieces Programme, which will be integrated into the Conventions List of representative intangible heritage. Of the forty-seven Masterpieces only four relate to nature and the universe.

The session also illustrated examples of sacred sites such as landscape and sacred groves from Africa and Asia, highlighting that the concept is universal despite the evident differences of the cultures and environments concerned. The example from Latin America in particular illustrated human creativity and invention while facing harsh and fragile environments, a case in point for the close interaction and interlinkages between cultural and biological diversity.

The session also discussed critical issues:

- how to make decision-makers aware of sacred sites;
- how to ensure the livelihoods of indigenous people and local communities that are under threat and marginalized;
- the unifying effects of sacred sites and groves for communities and their cultures;
- the potential of some of the sites for tourism and regional development;
- challenges imposed through the loss of traditional belief systems.

Session 8: Management examples of associative cultural landscapes: problems and perspectives

Chairperson: Elias Mujica, CONDESAN
Rapporteur: Mechtild Rössler, UNESCO

Synthesis of presentations

(1) Ken Taylor: Genius of the Place: (re)presenting cultural landscapes, World Heritage listing, and intangible values. Making spaces into places in Asia

Mr Taylor remarked that the World Heritage List, although including currently only fifty cultural landscapes, has many more if we take a closer look at the sites and their surroundings. He presented cases of cultural sites in Asia, including Angkor, Cambodia; Borobudur, Indonesia; and Bagan in Myanmar, and stressed that all of these have to be looked at from a different point of view, namely as living and associative cultural landscapes linking the past and the present. The current 400 sq km World Heritage Site of Angkor has to be managed within the context of a 5,000 sq km cultural landscape and the traditions of the local communities living in the region.

(2) Tumu Te Heuheu: Culture, landscapes and the principle of guardianship

Tumu Te Heuheu presented the case of Tongariro National Park in New Zealand – a natural World Heritage Site which was recognized as an associated cultural landscape in 1993 – the first cultural landscape under the 1972 Convention. He highlighted the main features important to his people, the mountain and the tribe, which cannot be separated. The management of this site has to be seen in historical perspective as it was donated to the people of New Zealand and the government designated it as a National Park. A fundamental principle of its management is its guardianship and stewardship. The management decisions of this cultural landscape are being taken together and this concerns all maintenance decisions. Land and people are seen as being linked together.

(3) Graeme Calma: The cultural and natural landscape of Uluru-Kata Tjuta National Park

As the chairperson of the management board of this cultural landscape – recognized also for its natural values – Mr Calma presented the management structure and management strategies of the World Heritage Site and UNESCO Biosphere Reserve of Uluru Kata Tjuta. The management includes a Board of Management, a Central Land Council and the traditional owners and local communities living on the site. He addressed specific management issues, including tourism and filming decisions, cultural maintenance decisions, fire and water management and mapping activities. At each step the community is consulted and assured that the decisions are taken appropriately; for which specific mechanisms are in place.

(4) Fady R. Asmar: Qadisha Valley, Lebanon: a biological, cultural, historical and religious heritage

Quadisha Valley and its Cedars of God were mentioned in the Bible. This is a holy site that links historical, cultural, religious and natural heritage values, thus truly linking cultural and biological diversity. The valley itself is rich in biodiversity due to the managed cultural landscape. Some loss in biodiversity has occurred because of the abandonment of the terraces and agricultural fields. The landscape is shaped as gardens, terraced fields, forest and intermediary spaces. The site is now managed with the Mediterranean garden as a concept and position scenario. Mr Asmar concluded that both religion and biodiversity are linked in this site within the collective memory; that biodiversity and agriculture are connected, and that tourism can open new opportunities if managed in an integrated way.

(5) Laura Chazarreta: The intangible values of Lanín National Park (Neuquén Province, Argentina)

Ms Chazareta presented Lanin National Park in Argentina as a case where tangible and intangible heritage are managed together, with the co-management of the native Mapuche communities as well as local groups. She highlighted the participatory process of the identification of sacred natural sites within the area, and the process of working with the communities to valorize the sites in a multicultural society. The different values include artistic, belief and spiritual values as well as traditional knowledge which is shared among the people. Education and awareness-raising is crucial, as is the projection and presentation of the park's values to a broader level of society.

(6) Estuardo Secaira: Planning for the conservation of sacred sites in the context of protected areas, an adaptation of a methodology and lessons from its application in Guatemala

Mr Secaira referred to experiences gained from projects at Tikal World Heritage Site and the Maya Biosphere Reserve towards an integrated methodology for biodiversity and cultural heritage through a SWOT analysis. Starting from a natural and moving to a cultural heritage and including intangible targets, which include local knowledge, social issues, customary law and spirituality, sacred and enchanted sites have been identified. He concluded that a systematic approach towards the inclusion of cultural and natural heritage is necessary, as well as the strengthening of the participation of spiritual guides.

Conclusions

This session brought together examples of associative cultural landscapes and sacred natural sites, the core theme of the symposium. Quadisha Valley, Uluru Kata Tjuta and Tongario were originally nominated for World Heritage status due to their natural values. The shift in recognition was on the national level as well as the international level, and acknowledged traditional culture, indigenous people and local communities and their heritage.

The key question of the session was the issue of integrated management, implying that spiritual, cultural and natural values have to be integrated in the management of the sites, as all of them contribute to the value people assign to these places. The cases from Latin and Central America also presented new approaches and methodologies to integrated management and planning, for cultural and spiritual, natural and biodiversity heritage. A key issue was also stewardship and guardianship in management issues, as well as examining the linkages in landscape and landscape approaches in management, going beyond the protected areas. Central to this approach is the community.

The session included six presentations covering five different regions and from a diversity of backgrounds. Perspectives ranged from the indigenous management of sites and indigenous leadership, protected area management, non-government organizations (Conservation International) and universities. The session highlighted that management is they key issue, the precondition for the conservation of our cultural and natural heritage.

The chairperson stated that the objectives of the session were fulfilled with the presentation of innovative and complementary management strategies for associative cultural landscapes. In terms of looking forward, some key issues that must be pursued are:

* the concepts and practice of guardianship and stewardship, proven not only to be adequate, but providing sustainable results;
* participatory practices and better description of specific mechanisms to ensure that participation is effective;
* the holistic perspective, both on-site, including all aspects, natural and cultural, tangible and intangible, and to integrate the surroundings to present a living dimension to the sites;
* new tools in management, and to adapt methodologies and lessons learnt to new management cases.

Session 9: Protective measures for sacred sites in the context of the Akwe:Kon Voluntary Guidelines

Chairperson: William Langeveldt, Commission for the Promotion and Protection of the Rights of Cultural, Religious and Linguistic Communities
Rapporteurs: Hui Lu, Dept. of Economic and Social Affairs, UN, and John Scott, Secretariat of the Convention on Biological Diversity

Synthesis of presentations

The chairperson made a brief introduction of the purpose of the session and introduced the speakers. He noted that the international community has recognized the close and traditional dependence of many indigenous and local communities on biological resources, notably in the preamble of the Convention on Biological Diversity (CBD). He also noted that there is also broad recognition of the contribution that traditional knowledge (TK) can make to both the conservation and the sustainable use of biological diversity – two fundamental objectives of the Convention – and the need to ensure equitable sharing of benefits arising from the utilization of traditional knowledge. For this reason, Parties to the Convention undertook, in Article 8(j), to respect, preserve and maintain traditional knowledge relevant for the conservation and sustainable use of biological diversity, and to promote its wider application.

The chairperson emphasized that most indigenous and local communities live in areas where the vast majority of the world's biological resources are found, and also consider themselves proponents of humanity's cultural diversity. They have used biological diversity in sustainable ways for thousands of years, and their cultures and knowledge are deeply rooted in the environment on which they depend. As a result of their close association with their territories, developments proposed to take place on their lands and waters have been a source of concern to them because of the long-term negative impacts on their livelihoods and traditional knowledge.

He noted that to address this concern as part of the work programme of Article 8(j), Parties to the Convention decided to develop, in cooperation with indigenous and local communities, guidelines for the conduct of cultural, environmental and social impact assessments regarding such developments. On the basis of this recommendation by the Open Ended Working Group on Article 8(j) and related provisions, the Seventh Conference of Parties adopted the Akwe:Kon (pronounced Argwe-gu) Guidelines for the Conduct of Cultural, Environmental, and Social Impact Assessment regarding developments proposed to take place or which are likely to impact on sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities. It is expected that impact assessments, procedures and methodologies embodied in the Voluntary Guidelines will play a key role in providing information on the cultural, environmental and social impacts of proposed developments, and thereby help to prevent their adverse impacts on the lives of indigenous and local communities.

He stressed that the framework of the CBD with regard to TK is extremely relevant to indigenous peoples and their sacred sites. He emphasized that indigenous peoples' historical experience with development had demonstrated that all too often they were victims of development rather than beneficiaries, and often that imposed development was unsustainable. He concluded by noting that Article 8(j) of the CBD aims at addressing this particular concern, and the Akwe:Kon Guidelines were developed, in cooperation with indigenous peoples, to implement Article 8(j)'s provisions and to ensure that indigenous peoples would be able to participate in impact assessments on any projects that may affect them.

(1) John Scott: The workshop on cultural, environmental and social impact assessments based on the Akwé:Kon Voluntary Guidelines

The representative of the Secretariat provided the Convention's background, and discussed in detail the work programme of Article 8(j) and related provisions of interest to indigenous and local communities. Emphasis was placed on the Akwe:Kon Voluntary Guidelines, which are expected to provide indigenous and local communities with information, possibilities and

methodologies to actively participate in impact assessment processes on any developments proposed to take place on their sacred sites, or on lands and waters traditionally occupied or used by indigenous and local communities. He noted that there was a great deal of work needed concerning awareness-raising among indigenous and local communities and other interested parties, including governments and the international system, on the usefulness of the guidelines.

He noted the general objective of the Akwe:Kon Voluntary Guidelines was to provide advice on the incorporation of cultural, environmental (including biodiversity-related concerns) and social considerations of indigenous and local communities into impact assessment procedures. He further noted that the specific objectives of the guidelines included support for the full and effective participation of indigenous and local communities in screening, scoping and development-planning exercises; taking into account the cultural, environmental and social concerns and interests of indigenous and local communities; taking into account the traditional knowledge of indigenous and local communities, with due regard to the ownership of the need for its protection; promoting the use of technologies associated with TK; identifying and implementing appropriate measures to prevent or mitigate any negative impacts of proposed developments; and finally, taking into consideration the interrelationships between cultural, environmental and social elements.

In closing, the representative of the Secretariat outlined procedures for impact assessments within the context of the Akwe:Kon Guidelines, and noted that the Guidelines provide a collaborative framework for ensuring the full involvement of indigenous and local communities in impact assessments. He also noted the particular relevance of the Guidelines to the broader context of the Symposium, and the strong link that the Symposium had established between sacred sites and protection of biological diversity. In contextualizing the Guidelines, he emphasized that the Guidelines were part of a package of international instruments aimed at preventing adverse impact of unsustainable development on sacred sites, and lands and waters traditional occupied and/or used by indigenous and local communities.

(2) Merle Alexander: Indigenous perspectives on the Akwe:Kon Guidelines and relevant case studies

Mr Alexander presented a case study on the application of the Guidelines within his traditional territory on the west coast of Canada, where he has been working with three First Nations in the impact assessment of the Alaska Highway Pipeline project, which is to be implemented along White Water River.

In setting the national context for his case study, he underlined that there are four different jurisdictions to consider when implementing international obligations and environmental regulatory regimes in Canada: the federal, provincial, territorial and aboriginal jurisdictions. He therefore noted that in the implementation of international obligations, in such measures as the Akwe:Kon Guidelines, there is need for a gap analysis on its implementation, in order to ensure that the principles stipulated in the guidelines are indeed fulfilled at the community level. He also noted that it may remain the responsibility of informed aboriginal groups to take proactive measures to ensure compliance, and noted the importance of information and capacity-building strategies necessary to support such community action.

Mr Alexander continued with his case study of the Alaska Highway Pipeline Project, noting that in the Yukon region of Alaska it will cross the territories of nine First Nations. A gap analysis conducted by Mr Alexander noted the applicability of Northern Pipelines Act, the Canadian Environmental Assessment Act, the Yukon Environmental Socio-Economic Act, the Yukon First Nations Final Agreements and relevant aboriginal case law. He outlined a process for an Akwe:Kon gap analysis, which included notification and public consultation, mechanisms (and resources) for indigenous participation, impact and benefit agreements (or the possibility of no-action options/alternatives), review and appeal processes, and the importance of cultural impact assessments. In discussing cultural impacts he identified particular cultural concerns such as cultural heritage, traditional knowledge agreements, customary practices, forms of social organization, systems of natural resource use, places of cultural significance, economic valuation of cultural resources, languages and customary law systems, which should be taken into account in an effective assessment.

In concluding, he noted that the effectiveness of the Akwe:Kon Guidelines remains in the domestic implementation of these guidelines. He suggested that the proactive engagement of aboriginal peoples (from Canada) in CBD processes may build capacity and translate to a more meaningful implementation of the guidelines on the ground. In ending, he noted that the 'voluntary' nature of the guidelines and the phrase 'subject to national legislation' may provide governments with strategies to avoid their responsibilities regarding their CBD obligations. Hence he called for a binding treaty regarding impact assessment, which incorporates the processes of free, prior and informed consent and mutually agreed terms.

(3) Erjen Khamaganova: Protection of sacred sites: global framework and local actions. Lessons from Lake Baikal and the Altai mountains of the Russian Federation

Ms Khamaganova presented a case study, within the context of the Akwe:Kon Guidelines, on the protection of sacred sites, looking at global frameworks and local actions: lessons from the Lake Baikal and the Altai Mountains of the Russian Federation. In her presentation she examined the meaning of the sacred and the role of traditional knowledge in traditional

Buryat life. In Buryat life, 'sacred' refers to the holistic unity of all living species, spirits and the physical (material) world, and is a significant factor in the formation of indigenous ways of thinking and cosmovision. An important area of indigenous people's individual and collective obligations is the deep spiritual work of maintaining the richness of a sacred site's biological diversity. She noted aspects of sacred sites that contribute to and promote biodiversity, such as a zone of peace and non-violence, and an arena for and actor in traditional education and inter-generation transfer of collective knowledge.

In her case study, Ms Khamaganova examined the historic context of Buryat native identity, and linked the deliberate historical destruction of native identity by dominant cultures to the destruction of sacred sites and a resulting loss in biodiversity. She noted that the Buryat experience was not unique among Russian indigenous peoples or indeed other indigenous peoples in general. She discussed the formation of a community-based indigenous network, referred to as the 'Light of the Ancient Lands', which united eleven associations of indigenous people from Siberia and the Russian Far East. The members of this association shared common goals such as the development of legal protection of scared sites. Pursuing these goals, the network chose two strategies with varying degrees of success. The Lake Baikal region examined the possibility of developing regional legislation, and the Altai Mountains region examined the creation of a specific form of specially protected territories within a framework of existing regulatory schemes.

Ms Khamaganova critically reported that the regional legislation had failed for a number of reasons. Among them, important indigenous considerations had been lost or compromised when expressed in modern legal language; the political context led to ambiguities in property rights; culturally appropriate management of the site was not considered; the legislation failed to capture the indigenous concept of community; and ultimately, the draft legislation failed to recognize the specific role extended to indigenous families as the basic unit of guardians of specific sacred sites. Ms Khamaganova further reported that the use of existing legal frameworks in the Altai Mountains region had been more successful. The reason for the greater success lay in local mobilization, and initiatives such as the creation of ethno-natural parks, which proved more culturally appropriate than federally managed systems of national parks. These ethno-natural parks allowed for both the cultural and biological values of specific areas to be recognized and protected. Unfortunately, she noted that although such successful strategies deserved consideration and perhaps replication in other indigenous areas, the prospect remained unlikely as recent developments in the nationality policy and current land reform make it impossible.

In concluding, the Russian indigenous expert focused on the usefulness and applicability of the Akwe:Kon Guidelines, noting that it is a holistic instrument and a useful global framework for local action. She recommended that the Guidelines be further promoted as a fruitful way to coordinate local actions with subnational, national and global actors vertically, as well as to strengthen lateral/horizontal cooperation. She called for further development of proactive documents that fully recognize the educational dimensions of sacred sites, and the need for restoration of sacred sites that have already experienced the negative impacts of development.

(4) Parshuram Tamang: UNPFII's mandate on environment

Mr Tamang provided a contextualized history of the indigenous movement and the international community, outlining the significance of the Convention on Biological Diversity and the recently established United Nations Permanent Forum on Indigenous Issues (UNPFII). He noted that the UNPFII has a broad mandate that covers culture, economic and social development, environment, education, health and human rights. In carrying out its mandate, the UNPFII is required to provide expert advice and recommendations on indigenous issues to the Economic and Social Council, as well as to programmes, funds and agencies of United Nations; raise awareness and promote integration and coordination of activities related to indigenous issues within the UN system; and prepare and disseminate information on indigenous issues.

After his introduction, Mr Tamang discussed in depth the importance of the mandated areas of culture and environment, and within environment, the issue of traditional knowledge. Noting that some eleven UN agencies are currently working on TK issues, he emphasized the need for greater coordination to ensure a holistic approach, which generated better outcomes concerning the protection and promotion of TK. He noted that any approach to TK must be rights-based, and that indigenous peoples' full and effective participation should be guaranteed through their free, prior and informed consent. He also noted that TK issues can be further promoted through such mechanisms as the Programme of Action for the Second Decade of the World's Indigenous Peoples.

In discussing the role of the UNPFII in coordinating indigenous issues (including in the area of environment and TK), he elaborated the recent recommendation of the UNPFII, that the Inter-Agency Support Group on Indigenous Issues (IASG) convene a technical workshop on indigenous traditional knowledge to address the various TK-related activities being undertaken by some eleven UN agencies, and seek how to better integrate indigenous peoples' views in these activities. In concluding he noted that the UNPFII hopes to develop a matrix of UN-related activities and outcomes regarding TK, to ensure a more holistic approach is developed regarding the promotion and protection of TK.

Tokyo Declaration

On the Role of Sacred Natural Sites and Cultural Landscapes in the Conservation of Biological and Cultural Diversity

We, the participants of the international symposium on 'Conserving Cultural and Biological Diversity: The Role of Sacred Natural Sites and Cultural Landscapes', assembled at the United Nations University Centre in Tokyo (Japan) from 30 May to 2 June 2005:

Expressing our gratitude to the United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations University (UNU), World Conservation Union (IUCN), the United Nations Convention on Biological Diversity (CBD), the United Nations Permanent Forum on Indigenous Issues (UNPFII) and United Nations Food and Agricultural Organization (FAO) for providing a forum to discuss the links between nature and culture, and in particular extend our appreciation to UNU and its staff for hosting the symposium;

Appreciating that the Symposium has been organized in the context of the 2005 World Exposition Aichi and has benefited from the support of the Japanese Government and the Japanese Agency for Cultural Affairs and the Christensen Fund;

Considering that sacred natural sites and cultural landscapes are of vital importance for safeguarding cultural and biological diversity for present and future generations;

Recognizing that many sacred natural sites have great significance for the spiritual well-being of indigenous peoples and local communities;

Noting the need to promote and safeguard cultural and biological diversity, particularly in the face of the homogenizing forces of globalization;

Bearing in mind that sacred natural sites, cultural landscapes and traditional agricultural systems cannot be understood, conserved and managed without taking into account the cultures that have shaped them and continue to shape them today;

Noting the unprecedented species extinction rate, pollution, climate change, the world water crisis and pressures on cultural diversity, which call for the development and adoption of ethical principles to sustain biological diversity and freshwater resources for present and future generations;

Being convinced that conservation of cultural and biological diversity together holds the key to ensuring resilience in both social and ecological systems;

Acknowledging the important role of indigenous peoples and local communities as custodians of sacred natural sites and as holders of traditional knowledge, which is fundamental for the preservation of biological and cultural diversity;

Further noting the importance of respecting indigenous peoples' rights to their lands and knowledge;

Acknowledging also the important role of spiritual traditions in the conservation of sacred natural sites and some cultural landscapes;

Taking into account the various international bodies, instruments, programmes, strategies and processes of relevance to the symposium's theme, and the importance of their effective implementation, in particular:

- the International Bill of Human Rights (1966);
- the 1971 Ramsar Convention on Wetlands of International Importance;
- the 1972 UNESCO World Heritage Convention;
- the International Labour Organization Convention 169 on Indigenous and Tribal Peoples (1989);
- the 1992 United Nations Conference on Environment and Development;

* the Convention on Biological Diversity (1992);
* the Seville Strategy for the World Network of Biosphere Reserves of the UNESCO Man and the Biosphere Programme (1996);
* the mandate of the UNPFII (2000);
* the 2001 UNESCO Universal Declaration on Cultural Diversity;
* the 2003 UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage;
* the IUCN International System of Protected Area Categories and the outputs of the IUCN Fifth World Parks Congress (2003);
* the FAO initiative on Globally Important Ingenious Agricultural Heritage Systems;
* the UNU initiative on People, Land Management and Ecosystem Conservation;

Call upon national authorities, protected area and site managers, indigenous peoples and local communities, the international system, governments and non-governmental organizations, to consider and implement, where appropriate:

* the UNESCO/IUCN Guidelines for the Conservation and Management of Sacred Natural Sites;
* the CBD Akwé:Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment Regarding Developments Proposed to Take Place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities;
* the Yamato Declaration on Integrated Approaches for Safeguarding Tangible and Intangible Cultural Heritage;

Further call upon governments, protected area managers, the international system, governmental authorities and non-governmental organizations and others to respect, support and promote the role of indigenous peoples and local communities, as custodians of sacred natural sites and cultural landscapes, through the rights-based approach, in order to contribute to their well-being and to the preservation of cultural and biological diversity of such sites and landscapes;

Invite intergovernmental and non-governmental organizations, the scientific community and the private sector, to enhance cooperation and to continue collaborative work for safeguarding the cultural and biological diversity embodied in sacred natural sites and cultural landscapes, and to better understand nature–culture interaction through comparative research;

Request UNESCO to establish, in order to ensure the holistic protection of sacred natural sites and cultural landscapes, a mechanism of cooperation between the 1972 and 2003 Conventions, envisaging mutually reinforcing safeguarding measures under international assistance provisions, as established in both conventions;

Also invite intergovernmental and non-governmental organizations, international financial institutions and the private sector to continue cooperating with governments, local authorities, and indigenous peoples and local communities, with their free, prior and informed consent and their full and effective participation, for safeguarding cultural, linguistic and biological diversity, through the protection of sacred natural sites and cultural landscapes;

Urge the development of holistic approaches that take into account and respect different knowledge systems and integrate ethical, social, technical and economic dimensions, recognizing the historical dynamics of cultures and landscapes, while acknowledging the need of indigenous peoples and local communities for their sustainable livelihoods;

Call upon governments, international organizations, non-governmental organizations, religious institutions, indigenous and local communities to work together to ensure respect for religious and spiritual traditions and practices linked to sacred natural sites, and to protect such sites against desecration and destruction;

Recommend the integration of actions to promote the protection of sacred sites and cultural landscapes of indigenous peoples in the Programme of Action for the Second International Decade of the World's Indigenous People;

Further request the organizers of the Symposium, as well as all participating institutions and individuals, to make special efforts for the wide dissemination of this Declaration;

Also invite them to carry forward the outcomes of the Symposium through appropriate mechanisms, and to consider the development of a coordinated action strategy for the protection of sacred natural sites and cultural landscapes.

UNESCO/IUCN Working Guidelines

for the conservation and management of sacred natural sites

1. Introduction

In many societies, traditional sacred natural sites fulfill similar functions as government-declared protected areas. Due to spiritual values attributed to these sites, access restrictions often apply, and such sites (groves, mountains, rivers and lakes, caves, even entire landscapes) are therefore natural or near-natural ecosystems and biotopes where human-induced disturbances and impacts are minimal. In many cases, these sites have survived environmental degradation because they are deeply embedded in local cultures and traditional belief systems. They can provide sanctuaries to rare or endangered species and therefore can play an important role as potential gene pools that can be used to restore degraded environments.

Natural ecosystems cannot be understood, conserved and managed without recognizing the human cultures that shape them, since biological and cultural diversities are mutually reinforcing and interdependent. Together, cultural diversity and biological diversity hold the key to ensuring resilience in both social and ecological systems.

Sacred natural sites often epitomize such cultural and biological diversity and importance due to their dual character in reflecting cultural worldviews and environmental significance. Sacred natural sites are areas where nature, the divine and remembrances come together in special combinations that are particularly meaningful to a community, society or people. They can be the abode of deities, nature spirits and ancestors. They can be feared and secret places or they can be benign areas for ceremony, contemplation and meditation allowing communication with the transcendental. Common to most sacred natural sites is that they are areas removed from everyday access and resource use.

If properly managed, these special places can contribute meaningfully to both the conservation of biological diversity and the maintenance of cultural identity. In this vein, sacred natural sites can be very important reference places of cultural identity. A group of people, a tribe, or entire nations can relate to natural sacred sites as their points of origin, the realm of their ancestors, the abode of their gods, their destinations of pilgrimage and worship, and overall, as the embodiment of their spiritual beliefs. The term 'sacred natural site' is used in this document in a generic sense as a place that is venerated and held in awe. Thus, while the term may refer to sites of religious importance, it also encompasses places that are of symbolic significance — where space, place, memory and spiritual meaning come together.

Sacred natural sites can be contained within legally protected areas or they can lie outside the legally designated protected area system. In both cases, sacred natural sites pose particular challenges with regard to their recognition and management. In the first case, it must be recognized that many protected areas have been superimposed over traditional use areas of indigenous and traditional peoples. In setting up protected areas around the world, the values and importance of sacred places and traditional uses have often been ignored, thus affecting the fundamental rights of those local cultures. This situation has many times led to conflict and mistrust, creating obstacles to the development of constructive relationships and cooperation between indigenous or traditional peoples and conservation agencies.

In the second case, sacred places may be jeopardized by desecration of trespassers who simply ignore the sacredness of the area, which has a transcendent meaning for a certain group of people relating to that place. Worse, a sacred natural site could be jeopardized by its transformation into an economically 'more productive' area (e.g. logging, agriculture, mining) if the sacred natural site does not benefit from inclusion in a legally protected area.

The purpose of these guidelines is to distill the experiences of field practitioners who have managed sacred natural sites in different parts of the world, in order to share their experiences — and recommendations derived from them — with

others involved in the management of these special places. This particular document is a first, preliminary attempt at developing the guidelines. It has been written as the basis for discussions on this topic at the Vth World Parks Congress (WPC), which was held in Durban, South Africa in September 2003. The World Parks Congress then served to further revise the guidelines, which are reflected below.

2. Management and Conservation Challenges

Those managing sacred natural sites (SNS) face a variety of challenges, though each site is unique and has its own combination of challenges and opportunities (UNESCO, 2001; UNESCO, 2003). Some of the most common challenges are the following:

2.1 Multiple Stakeholders: SNS may be sacred or important areas for more than one group. In such cases, multiple stakeholders with differing perceptions, uses of a site, nomenclatures, practices and traditions must be taken into account if conflict is to be avoided. Traditional custodians, pilgrims, local residents, tourists and recreationists may all have differing demands for the site.

2.2 Visitor Pressures and Access: Designation of an important SNS as a protected area at the national level, or designation as a biosphere reserve and/or World Heritage site at the international level, can popularize a site and cause increased visitor pressures for which managers and traditional custodians are unprepared. With increased visitation, rights of access and demands for infrastructure development can become significant issues that conflict with sacred values and negatively impact the site's quality and integrity. Pilgrimages and pilgrimage routes can also cause conflicts with local land use and/or property rights.

2.3 Culturally Sensitive Activities: Many activities normally engaged in by visitors or local groups may be culturally inappropriate in SNS. Some examples of such activities are the climbing of sacred mountains or rock formations, entering into sacred caves or forests, bathing in sacred rivers, lakes or springs, participating in sacred ceremonies without permission of the celebrants, hunting of sacred animals, scattering of cremation ashes, leaving of 'New Age' offerings, or entering into sacred areas without permission or without culturally appropriate preparation.

2.4 Development Pressure: Encroachment, agriculture, pastoralism, hunting, logging, road-building, tourism and mining are development pressures that can have significant adverse impacts on SNS. Such pressures are particularly difficult to deal with if the SNS is not officially recognized or if there is secrecy regarding the site or the rituals associated with it.

2.5 Environmental Pressure: Anthropogenic and natural disasters such as pollution, climate change, fires, floods, erosion, and other related factors can create stresses that negatively impact sacred values and practices, as well as the physical integrity of sites.

2.6 Buffering: SNS which are not properly buffered from surrounding activities, such as population increase, residential development, agriculture, grazing, hunting or tourism, can be negatively impacted.

2.7 Ownership: SNS located in areas not owned by the traditional custodians, and not within established protected areas, create extraordinary challenges for management.

2.8 Political Access: SNS recognized by minority groups or the powerless in a society are often unable to marshal the political support needed to gain national recognition or install sympathetic management regimes. This is particularly true of sites recognized by minority ethnic or religious communities.

2.9 Economic Considerations: Balancing the material and non-material values of an area is always difficult, but especially so in the case of SNS.

2.10 Seasonal Differences: Some SNS may be of cultural importance during limited periods, as when the area's values are associated with pilgrimages or festivals at specific times of the year. This may lead to increased demands or peak usage during specific periods that may be incompatible with uses the rest of the year.

2.11 Conflicting Jurisdictions and Integrated Approaches to Management: SNS may contain cultural resources managed by traditional custodians or government agencies that differ from the natural resource management entity. This may cause conflicts between the management perspectives or philosophies of the different entities, and make integrated approaches to management an ongoing challenge. The charging and allocation of visitor use fees is often a particularly divisive issue.

2.12 Different Ways of 'Knowing': Modern and traditional management entities often have conflicting views as to the means for acquiring the knowledge needed to make informed decisions on site management. While for modern management agencies science is the basis for acquiring information, traditional custodians may have greater confidence in knowledge and understandings that have been passed down through the ages, or which are acquired through spiritual revelations. Finding ways to balance these different approaches to knowledge and understanding can be extremely challenging.

2.13 Historically Sacred Sites No Longer Associated with Traditional Custodians: Sites which were historically considered sacred (e.g. Machu Picchu, Peru), but which are no longer associated with traditional custodians, present a series of difficulties for management. There are no traditional stakeholders to consult or to include in participatory management schemes. The value of a historically sacred site to modern societies is often difficult to establish and defend, especially when there have been multiple custodians over the centuries.

3. Management and Conservation Opportunities

3.1 Conservation Value: Many SNS have a high degree of biodiversity and are often important areas for freshwater conservation. Due to access restrictions, they are often found in a natural or near-natural state in virtually all the world's ecosystems and landscapes, thus serving as sanctuaries and gene pools for rare, endangered and endemic species. In areas suffering from excessive human impact and environmental degradation, SNS can serve as 'indicator sites' for the restoration and rehabilitation of degraded systems. Based on species inventories in SNS, strategies can be formulated for the reintroduction of native and endemic species in a wider spatial context beyond the area covered by a SNS itself.

3.2 Sustainable Dimension of Conservation: As SNS are mostly community-based conservation areas, and are usually fully in line with traditional belief systems and values, their protection tends to be more sustainable than established legally protected areas. Traditional custodians and local people often manage SNSs in ways that have proven to be effective over long periods of time.

3.3 Model Sites for Integrated Management: SNSs reflect a more holistic view of human-nature interactions. They integrate cultural, natural and social values in a single management system.

3.4 Model Sites for Community-Based Conservation: Many SNSs can be considered as model sites for participatory conservation strategies and practises. As local people recognize the importance of protecting *their* SNS, such culturally important sites facilitate community participation in overall resource management and conservation.

3.5 Traditional Knowledge: Custodians of SNS often also perform the function of traditional healers who have intimate knowledge of local plant and animal species. With a plethora of traditional ecological knowledge on ecosystem structure, functioning and dynamics, custodians can be important resource people for overall ecosystem management. The integration of traditional ecological knowledge and modern environmental science can be beneficial for sustainable land management.

3.6 Cultural Identity and Diversity: As carriers of culture-specific worldviews, traditional belief systems and languages, SNS have tremendous cultural value. Many SNS are reference areas of cultural, religious and national identity. Cultural rites and practices (including music, song, dance, poetry, folklore), which should be preserved in the context of maintaining cultural diversity, are associated with SNS. The recognition of SNS offers a possibility to support endangered and vanishing cultural systems.

3.7 Eco-Tourism: SNS are both a cultural and natural heritage for local people. At the interface of culture and nature, they can provide important opportunities for eco-tourism development, assisting visitors in experiencing new cultures while also

learning about nature. If practised well and managed with a guiding set of ethical principles, eco-tourism linked to SNS can benefit local people directly, but only if due respect is paid to indigenous and local peoples' value systems.

3.8 Intercultural Dialogue: SNS can provide a valuable intercultural space to experience human-nature relationships from different cultural perspectives. As such, they can serve to build bridges for intercultural dialogue, understanding, tolerance and peace.

3.9 The Value of the Sacred: To many people, the 'sacred nature' of a SNS has an intrinsic value, which should be respected and preserved. There are many shared, fundamental religious/spiritual/philosophical values that exist between different cultures illustrating that cultural and biological diversity are intertwined and reinforced by such unique and long-established relations between people and place as embodied in SNS.

4. Guidelines for Conservation and Management

The following guidelines are based on basic concepts, which refer both to respect for the environment as well as respect for traditional and spiritual belief systems.

4.1 Recognition: Sacred natural sites should be officially recognized. If sacred natural sites occur within established and legally protected areas, their recognition by government authorities will help to increase the overall protection of the entire area through an added cultural value. Such recognition will, therefore, also benefit the 'natural' part of a protected area. The official recognition will instill a sense of pride and ownership for the local population of *their* sacred site. It will also help to safeguard against the desecration of sacred sites by visitors who may not know that they are on sacred lands. Finally, it will contribute to avoiding friction among local communities, conservation agencies and government institutions over land use practices. Obviously, official recognition of a sacred natural site should only be effected if the custodians of the site, the chiefs and elders and the community at large, agree to and express their willingness for such official recognition. If a sacred natural site occurs outside established and legally protected areas, their official recognition by government authorities can greatly help to increase the overall protection of the environment. The cultural values tied to sacred places could pave the way for the recognition of an area as a sacred monument or landscape, which in turn will reinforce conservation of the environment at large. This will be particularly useful in cases where the natural environment may be subject to transformation into "productive" land uses, such as for mining, logging, agricultural or residential purposes.

4.2 Inclusion: The management of sacred natural sites must involve all relevant stakeholders. Sacred natural sites are not relevant to one or a few individuals only, but to an entire group of people. Many sacred sites are significant to a number of different cultures. Therefore, the entire community for whom the sacred natural site has a specific value must be considered, especially the custodian(s) of the sacred natural site, the tribal chief and elders, but also women and children. In addition, the community which inhabits the wider area and which may not necessarily share the same belief system as the "sacred site community" should also be consulted with regard to the overall usage of the sacred natural site as a special conservation area. Local and national authorities in charge of the overall administration of the area must be involved for the provision of special designations for the conservation of the site if needed. Only the widest possible participation of all stakeholders can ensure the safeguarding of a sacred natural site.

4.3 Voluntary Participation: The conservation of sacred natural sites can only be effected through the voluntary participation of local people. The voluntary participation of local people in conserving sacred natural sites is the fundamental principle on which the integrity of a sacred area relies. It is therefore essential that local people be consulted on their willingness to accept assistance from outside to help strengthen the conservation of their sacred natural site. For fear of a sacred site's desecration by the uninitiated, local custodians and other members of a community may not always consent to outside assistance on area management. If such fears or concerns exist, they should be fully respected and no pressure whatsoever should be exerted on the local community.

4.4 The Secrecy of the Sacred: No outside pressure should be exerted on local communities to compromise the secrecy of their sacred natural sites. Many sacred natural sites are also 'secret' sites to a community at large, or to a specific gender or age group, and their existence cannot be revealed to the uninitiated. As an overriding principle, every precaution should be taken not to exert any pressure on a community that may compel it to disclose information or violate the secrecy of their sacred natural site. When confidential cultural information is shared, all necessary means should be taken to ensure privacy and to prevent disclosure to the public.

4.5 Use of Plant/Animal Species for Ritual Purposes: Selective usage of biotic resources for ritual purposes should be permissible in sacred natural sites if the overall quality of the environment is not jeopardized. While the respect of sacred natural sites is generally beneficial to environmental conservation, some traditional belief systems not only require the conservation of the area but may also require offerings and sacrifices of plant/animal species that live within a sacred natural site. While such traditions are often a classic source of conflict between protected area managers and local communities, efforts should be made to explore mechanisms by which the selective usage of such plant/animal species may be permissible for ritual purposes (while excluding the use of species for commercial purposes). If such mechanisms prove to be successful, they could also help in building trust and confidence between protected area managers and local communities and may help to reduce land use conflicts over the protected area in general. The selective usage of biotic resources could be spelled out in a "social contract" between all parties concerned. Great attention, however, should be given to avoid any negative impacts on the environment that such selective usage of biotic resources could have on the environment, and priority should be given to retaining the special qualities of the area.

4.6 Conservation Approach: An extended concept of conservation is needed in preserving and managing sacred natural sites. The classical western approach to conservation is based on scientific knowledge, while the traditional approach in sacred natural sites is based on values. In managing sacred natural sites, a rethinking of the most appropriate approach is needed to skillfully develop a sound multicultural system of conservation. The merger of a values-based approach and an approach based on scientific knowledge would seem to be most appropriate when managing sacred natural sites.

4.7 Integrated Management: Sacred natural sites require an integrated management system. Since sacred natural sites combine the preservation of the environment and its biotic resources as well as the living cultural manifestations of local and indigenous communities with their belief systems, a truly integrated management system is needed that must care for both the natural and the cultural space. In this vein, a holistic management scheme must be put into place that satisfies conservation aims, cultural preservation objectives, and expression of spiritual belief systems. Ecologists, cultural anthropologists and traditional practitioners should combine their efforts to ensure integrated management of the natural environment and the socio-cultural specificity of the area.

4.8 Modern Science and Traditional Knowledge: Modern science and traditional knowledge should be fully utilized for the conservation and management of sacred natural sites. Integrated management schemes will have to call upon the use of modern science as well as the use of traditional knowledge. As regards traditional ecological knowledge, many custodians of sacred natural sites have a wealth of knowledge on the biophysical environment in their roles as protectors of sacred species, traditional healers and herbalists, or as decision-makers in the context of the agricultural calendar. While respecting and protecting the intellectual property of indigenous cultures, the sharing of modern science and traditional ecological knowledge should be beneficial for all stake holders in the sustainable management and conservation of a site. Scientists — including conservation ecologists, cultural anthropologists and socio-economists — and custodians of traditional knowledge should be encouraged to work together to ensure the sustainable safeguarding of sacred natural sites.

4.9 Zoning: Buffer zones and transition zones should be created around sacred natural sites and monuments. Many sacred natural sites are subject to encroachment due to population pressure and economic forces. It will be useful to create buffer and transition zones around sacred natural sites that will enhance the conservation of the sacred site itself while at the same time ensuring alternative incomes for the local population. Ideally, the buffer zone should consist of the same vegetation found at the sacred natural site. In areas that are prone to fire, shelterbelts should be established around the buffer zone. These shelterbelts could also help to 'designate' with its boundaries the general area considered to be sacred. The transition zone could be earmarked for economic activities that further help to conserve the site while allowing the generation of incomes for the local population (e.g. cultivation of crops, fruits, firewood production etc.). This zone would help to reduce pressure on the sacred site for economic reasons.

4.10 Consultation: Frequent and regular consultations must be held among local communities, site managers and government officials on the conservation of their sacred natural site. As culture is dynamic, and as traditional belief systems are an expression of culture, so also are traditional belief systems dynamic and likely to change over time. This may entail younger generations no longer sharing the same values as older generations with regard to the preservation and maintenance of a sacred natural site. Also within a community, different views may exist on the continued need for the preservation of a sacred natural site regardless of age (or gender). Therefore, regular consultations must be held within the local communities and with site managers and government officials that will allow them to determine linkages between the status of conservation and the prevailing traditional

belief systems. The monitoring and evaluation of such linkages should lead to regular reassessment of the need to reinforce, maintain at the same level, or perhaps reduce the conservation of the sacred natural site.

4.11 Training and Capacity-Building: The study and management of sacred natural sites must be embedded in long-term training and capacity-building programmes. The complexity of sacred natural sites in terms of socio-cultural structure and environmental repercussions necessitates special training and capacity building for protected area managers that can only be obtained through close interaction with the community in charge of a sacred natural site. The experience of protected area managers in handling sacred natural sites should be compiled and disseminated to other site managers, such as through IUCN and UNESCO. Similarly, and if they so wish, traditional custodians of sacred natural sites should also benefit from training in 'state of the art' environmental management and conservation techniques.

5. Conclusion

The erosion of genetic resources, the shrinking of wildlife habitats, and the loss of biological diversity are accelerating at unprecedented rates. At the same time, the diversity of cultures with their languages, ways of life and specific belief systems is jeopardized by globalization. As every ecologist knows, diverse systems tend to be more resilient than mono-structured systems. We therefore need to maintain cultural and biological diversity in a sustainable manner. As regards the environment, its conservation can only be sustainable if it finds leverage in local cultures. Sacred natural sites can play a vital role in ensuring the sustainable conservation of both nature and culture.

Yamato Declaration

on Integrated Approaches for Safeguarding Tangible and Intangible Cultural Heritage

We, the experts assembled in Nara, Japan,

1. express our gratitude to the Japanese organisers and UNESCO for providing a forum to discuss integrated approaches for safeguarding tangible and intangible cultural heritage, and

2. taking into account
the International Charter for the Conservation and Restoration of Monuments and Sites (the 1964 Venice Charter),
the Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO World Heritage Convention, hereinafter called 'the 1972 Convention'), the definition of 'Cultural Landscape' established by the World Heritage Committee (1992), the Nara Document on Authenticity (1994);

3. further taking into account
the Recommendation on the Safeguarding of Traditional Culture and Folklore (1989),
the Proclamation of Masterpieces of the Oral and Intangible Heritage of Humanity (1997),
the Convention for the Safeguarding of the Intangible Cultural Heritage (hereinafter called "the 2003 Convention");

4. recognising that safeguarding intangible cultural heritage is as important as protecting tangible cultural and natural heritage, and that the world community has come to realise that intangible cultural heritage has to be considered and safeguarded in its own right;

5. recalling the definitions of cultural and natural heritage in the 1972 Convention;

6. further recalling that intangible cultural heritage is defined in the 2003 Convention as 'the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage [… and that …] this intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity';

7. considering that the Nara Document marked an epoch in the conservation of heritage, emphasizing that interpretations of authenticity and their application should be attempted within the specific cultural context;

8. further considering that intangible cultural heritage is constantly recreated, the term 'authenticity' as applied to tangible cultural heritage is not relevant when identifying and safeguarding intangible cultural heritage;

9. realising that the elements of the tangible and intangible heritage of communities and groups are often interdependent;

10. further considering that there are countless examples of intangible cultural heritage that do not depend for their existence or expression on specific places or objects, and that the values associated with monuments and sites are not considered intangible cultural heritage as defined under the 2003 Convention when they belong to the past and not to the living heritage of present-day communities;

11. taking into account the interdependence, as well as the differences between tangible and intangible cultural heritage, and between the approaches for their safeguarding, we deem it appropriate that, wherever possible, integrated approaches be elaborated to the effect that the safeguarding of the tangible and intangible heritage of communities and groups is consistent and mutually beneficial and reinforcing;

and we call upon

12. national authorities, international, governmental and non-governmental organisations, and individuals actively engaging in safeguarding cultural heritage to explore and support investigations of strategies and procedures to integrate the safeguarding of tangible and intangible heritage, and to always do so in close collaboration and agreement with the communities and groups concerned;

13. UNESCO to adopt and implement in its programmes and projects, where appropriate, an inclusive and integrated vision of heritage, to support capacity building and to provide guidelines for best practices in the spirit of this Declaration;

14. national authorities and all other stakeholders to take concrete measures for raising awareness of the importance of safeguarding heritage, especially through formal and non-formal education, and for ensuring active local participation in this regard;

15. all stakeholders to take advantage of new information and communication technology in implementing programmes and projects integrating the safeguarding of tangible and intangible heritage;

16. all stakeholders to promote economically rewarding heritage-related activities without compromising the integrity of communities and the viability of their heritage;

17. Member States of UNESCO to ratify at their earliest convenience the Convention for the Safeguarding of the Intangible Cultural Heritage, adopted by the General Conference of UNESCO in October 2003.

Nara, Japan

International Conference on the Safeguarding of Tangible and Intangible Cultural Heritage: Towards an Integrated Approach, 20-23 October 2004

Akwé:Kon Voluntary Guidelines

an introduction

Summary

Most indigenous and local communities live in areas where the vast majority of the world's genetic resources are found and their cultures and knowledge are deeply rooted in the environment on which they depend. As a result, developments proposed to take place on their sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities have been a source of concern to these communities because of the potential long-term negative impacts on their livelihoods, cultures and traditional knowledge.

To address this concern, Parties to the Convention decided to develop, in cooperation with indigenous and local communities, the Akwé:Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment regarding Developments Proposed to take placeon, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities. The Voluntary Guidelines were named by a Mohawk term: Akwé:Kon meaning 'everything in creation', so as to emphasize the holistic nature of this instrument. Their publication under the Convention on Biological Diversity makes them available to a wide audience, including Parties to the Convention and Governments, international and regional organizations, indigenous and local communities and non-governmental and civil society organizations.

Introduction

The Akwé:Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessments Regarding Developments Proposed to Take Place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities were developed pursuant to task 9 of the programme of work on Article 8(j) and related provisions adopted by the Conference of the Parties of the Convention on Biological Diversity at its fifth meeting, in May 2000. The programme of work was, itself, adopted on the basis of recommendations from the Ad Hoc Open-ended Working Group on Article 8(j) and Related Provisions established at the fourth meeting of the Conference of the Parties, in 1998.

The programme of work on Article 8(j) and related provisions is the main instrument that Parties to the Convention on Biological Diversity have given themselves to achieve the commitments in Article 8(j) to respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity, to promote their wider application with the approval and involvement of the holders of such knowledge, and encourage the equitable sharing of the benefits arising from the utilization of traditional knowledge. Other major elements of the work programme include: participatory mechanisms for indigenous and local communities, status and trends, equitable sharing of benefits, legal elements, as well as monitoring elements of which the Guidelines are a part.

The Akwé:Kon Voluntary Guidelines provides guidance to Parties and Governments on the incorporation of cultural, environmental and social considerations of indigenous and local communities into new or existing impact-assessment procedures. They should be applied in conjunction with the guidelines for incorporating biodiversity-related issues into environmental impact assessment legislation and/or process in strategic environmental assessment endorsed by the Conference of the Parties in decision VI/7 A and contained in the annex to that decision.

Parties and Governments are invited to take the Voluntary Guidelines into consideration whenever developments are proposed to take place on, or are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities. Similarly, international financial and development agencies are invited to take into consideration the need to incorporate and implement the guidelines within the framework of bilateral and multilateral cooperation efforts and to provide funds, as appropriate, for the prevention and mitigation of negative impacts and risk factors of proposed projects and policies. The Voluntary Guidelines should be adapted to suit the circumstances of each development initiative.

The application of the Akwé:Kon Voluntary Guidelines has the potential to contribute significantly to achieving the objectives of the Convention on Biological Diversity with respect to traditional knowledge as set out in its Article 8(j) and related provisions.

Purpose And Approach

The Akwé:Kon voluntary guidelines are for the conduct of cultural, environmental and social impact assessments regarding developments proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities.

1. The Guidelines are voluntary and intended to serve as guidance for Parties and Governments, subject to their national legislation, in the development and implementation of their impact-assessment regimes. The guidelines should be taken into consideration whenever developments are proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities.

2. The objective of these Guidelines is to provide general advice on the incorporation of cultural, environmental, including biodiversity-related, and social considerations of indigenous and local communities into new or existing impact-assessment procedures, noting that some existing procedures may take these concerns into consideration in different ways. The Guidelines should be applied in conjunction with the guidelines for incorporating biodiversity-related issues into environmental impact assessment legislation and/or process and in strategic environmental assessment endorsed by the Conference of the Parties in paragraph 1 of decision VI/7 A, and contained in the annex to that decision.

3. More specifically, the purpose of these Guidelines is to provide a collaborative framework within which Governments, indigenous and local communities, decision makers and managers of developments can:

a. Support the full and effective participation and involvement of indigenous and local communities in screening, scoping and development planning exercises;
b. Properly take into account the cultural, environmental and social concerns and interests of indigenous and local communities, especially of women who often bear a disproportionately large share of negative development impacts;
c. Take into account the traditional knowledge, innovations and practices of indigenous and local communities as part of environmental, social and cultural impact-assessment processes, with due regard to the ownership of and the need for the protection and safeguarding of traditional knowledge, innovations and practices;
d. Promote the use of appropriate technologies;
e. Identify and implement appropriate measures to prevent or mitigate any negative impacts of proposed developments;
f. Take into consideration the interrelationships among cultural, environmental and social elements.

4. The Guidelines recognize that developments vary enormously in nature, scale and complexity with respect to such aspects as their scope, size and duration; strategic and economic importance; and the nature of impacts. The Guidelines therefore should be adapted to suit the appropriate circumstances of each development. Individual countries may redefine the steps in the cultural, environmental and social impact assessment procedure to their needs and requirements, taking

into account the needs and concerns of indigenous and local communities and their national legislative, administrative and policy framework, bearing in mind that nothing in these Guidelines should adversely affect biodiversity and the livelihoods of other communities, and that they should be implemented in a manner that is consistent with international law and with other international obligations.

5. Cultural, environmental and social impact assessment procedures should refer to other relevant domestic legislation, regulations, guidelines and international and multilateral environmental agreements and protocols that have been ratified by the Party and have come into force, bearing in mind that nothing in these Guidelines should adversely affect biodiversity and the livelihoods of other communities, and that they should be implemented in a manner that is consistent with international law and with other international obligations.

Note

1. Pronounced (agway-goo). A holistic Mohawk term meaning 'everything in creation' provided by the Kahnawake community located near Montreal, where the guidelines were negotiated.

The guidelines (available in English, French, Russian and Spanish) may be obtained from the national focal points for the Convention on Biological Diversity, or the Convention Secretariat.

Secretariat Convention on Biological Diversity
393 Saint-Jacques, Suite 300
Montreal, QC, H2Y 1N9
Canada
Tel.: +1 (514) 288-2220
Fax: +1 (514) 288-6588
Email: secretariat@biodiv.org

or directly from the CBD website: http://www.biodiv.org/programmes/outreach/awareness/publications.asp?page=thm

List of participants

Speakers

Noriko Aikawa (Ms)
Advisor to the Assistant Director-General for Culture,
UNESCO
5-27-7 Hakusan Bunkyo-ku
Tokyo
Japan

Gulnara Aitpaeva (Ms)
Director
Public Fund Research Center Aigine
21-120, Kievskaya Street
Bishkek, 720001
Kyrgyz Republic

Alfonso Rojo Alem (Mr)
Representative of Fondo Indigena in
Bolivia

Merle C. Alexander (Mr)
Boughton Peterson Yang Anderson Law Corporation
Suite 1000 - 595 Burrard Street
Vancouver
British Columbia V7X 1S8
Canada

Fady R. Asmar (Mr)
MK2 Bldg
Hazmieh-Mar Takla
Beirut
Lebanon

Teddy Baguilat (Mr)
40 Mahiyain Street
Sikatura Village, Q. C.
Philippines

Metasebia Bekele (Ms)
c/o Ato Selemon Telila
Bureau of information and Culture
P.O. Box 72
Awasa
Ethiopia

Edwin Bernbaum (Mr)
Director
Sacred Mountains Program
The Mountain Institute
1846 Capistrano Ave.
Berkeley, CA 94707
USA

Graeme Calma (Mr)
Deputy Chairman
Mutitjulu Community Council
Uluru - Kata Tjuta National Park
PO Box 53
Yulara, NT 0872
Australia

Laura Chazarreta
Movimiento Barrios de Pie
Mendoza
Argentina

Nadezhda Cherenkova (Ms)
Director of the Solovetsky filial branch of the White-Sea Biological Station
of the Moscow Lomonosov State University (MGU)
119270 Moscow
Russian Federation

Makko Dogisso Dosha (Mr)
C/O Ato Selemon Telila
Bureau of information and Culture
P.O. Box 72
Awasa
Ethiopi

Jim Enote (Mr)
Executive Director
A:shiwi A:wan Museum and Heritage Center
P.O. Box 1009
Zuni
New Mexico 87327
USA

Lawrence Foana'ota (Mr)
Director of Museum
Solomon Islands National Museum
PO Box 1525
Honiara
Solomon Islands

Yoshihisa Fujita (Mr)
Department of Geography,
Aichi University
Machihatamachi 1-1Toyohashi-shi,
441-8522 Aichi Prefecture
Japan

Anthony Githitho (Mr)
Coastal Forest Conservation Unit
National Museums of Kenya
P.O. Box 596 Kilifi
Kenya

Safar Hakdodov (Mr)
Kinoservice Ltd.
43 Bukhoro Street
Dushanbe
Tajikistan

Fekri Hassan (Mr)
Petrie Professor
University College London
Institute of Archaeology
31-34 Gordon Square
WC1H 0PY
London
United Kingdom

Wakako Ichikawa (Ms)
Conservation International - Japan Program
Shinjuku i-Land Tower 39F, 6-5-1
Nishi-Shinjuku
Tokyo 163-1339
Japan

Kunio Iwatsuki (Mr)
Chairman of MAB National Committee of Japan
University of the Air
815-29 Kamoshida
Aoba-ku
Yokohama 227-0033
Japan

Masami Iwasaki (Ms)
Interpreter/ co-presenter for Koichi Kaizawa (Mr):
Professor, Department of English and Cultures, Hokkai-gakuen University,
Japan

Rogelio Mejia Izquierdo (Mr)
Confederacion Indigena Teyrona
Ca. 19A #23-05 Santa Marta
Colombia

Koichi Kaizawa (Mr)
Instructor, Ainu Culture and Environment Conservation Measures Section,
Nibutani Ainu Culture Museum;
55 Nibutani Biratori-cho
Saru-gun
Hokkaido 055-0101
Japan

Hayao Kawai (Mr)
Commissioner of Japan
Agency for Cultural Affairs of Japan
2-5-1, Marunouchi
Chiyoda-ku
Tokyo 100-0005
Japan

Erjen C. Khamaganova (Ms)
1022 1/2 N.
Madison Bloomington
IN 47404
USA

Josep Maria Mallarach (Mr)
Fundación de Estudios Tradicionales
Apartat de correus 148
17800 Olot
Spain

Christopher McLeod (Mr)
Sacred Land Film Project
P.O. Box C-151
La Honda, CA 94020
USA

Makoto Motonaka (Mr)
Chief Senior Specialist for Cultural Properties
Monuments and Sites Division
Cultural Property Department
Agency for Cultural Affairs
3-3-2, Kasimugaseki
Chiyoda-ku
Tokyo 100-0013
Japan

Elias Mujica (Mr)
Deputy Coordinator
Consorcio para el Desarrollo Sostenible de la Ecorregión Andina
(CONDESAN)
International Potatoe Centre
Av. La Universidad 795, La Molina
P.O. Box 1558, Lima 12
Peru

Maharja Muthoo (Mr)
President, Roman Forum
Via Teosebio 44
Casalpalocco
00124 Rome
Italy

Masahiko Ohsawa (Mr)
Professor of Ecology
Institute of Environmental Studies
Graduate School of Frontier Sciences
The University of Tokyo
7-3-1 Hongo
Tokyo 113-0033
Japan

Cynthia Orlando (Ms)
Hawai'i Volcanoes National Park
P.O. Box 52
Hawai'i National Park, HI
USA

Gloria Pungetti
Dept. of Environmetal Biology
University of Reading
Whitenights PO Box 217
Reading RG6 6AH
UK

Hanta Rabetaliana (Ms)
Madame le Chef de Région Haute Matsiatra
Palais des Conseillers Provinciaux Tsianolondroa
301 Fianarantsoa
Madagascar

P.S. Ramakrishnan (Mr)
School of Environmental Sciences, Jawaharlal Nehru University, New Delhi
and G.B. Pant Institute.
School of Environmental Sciences
Jawaharlal Nehru University
New Delhi – 110 067
India

Jorge Recharte (Mr)
Director
The Mountain Institute-Andean Programme
Pasaje Ricardo Palma 100
Soledad
Huaraz
Peru

Guillermo E. Rodriguez-Navarro (Mr)
Corporación Caja de Herramientas
Calle 85 No. 21-31
Bogotá, D.C.
Colombia

Estuardo Secaira (Mr)
Conservation Science & Stewardship Adviser
The Nature Conservancy-Guatemala
12 Ave. 14-41 Zona 10 Colonia Oakland
Guatemala
Guatemala. C.A.

Phillip Segadika (Mr)
Principal Curator
Archaeology and Monuments Division
Botswana National Museum
Private Bag 00114
Gaborone
Botswana

Pei Shengji (Mr)
Professor and President
Chinese Ethnobotany Association
Kunming Insitute of Botany
Chinese Academy of Sciences
Kunming 650204
China

Lhakpa N. Sherpa (Mr)
Director
The Mountain Institute (TMI)
Asia Regional Office
P.O Box 2785, Bhatbateni
Kathmandu
Nepal

Herwasono Soedjito (Mr)
Programme Director
Indonesian Institute of Sciences
Ji.Jend. Gatot Subroto No. 10,
Jakarta 12710
Indonesia

Wolde Gossa Tadesse (Mr)
Program Officer
African Rift Valley (Ethiopia)
The Christensen Fund
145 Addison Avenue
Palo Alto, California 94301
USA

Ken Taylor (Mr)
Professor Ken Taylor
Humanities Research Centre
Old Canberra House
Building 73
Canberra Act 0200
Australia

Tumu Te Heuheu Chief (Mr)
c/o Ms Lianne Fraser
Community Relations Turangi Taupo Area
PO Box 528, Taupo, New Zealand
155 Centennial Drive
Taupo
New Zealand

Edward M. Telly (Mr)
Regional Director
Environmental Protection Agency
P.O Box 620
Tamale
Ghana.
Or:
c/o Environmental Protection Agency (EPA)
Head Office
P.O. Box M326
Accra
Ghana

Octaviana V. Trujillo (Ms)
2692 N. Sandstone Way
Flagstaff
AZ 86002
USA

Bas Verschuuren (Mr)
Asserpark 44 8b2
6706 HB Wageningen
The Netherlands

Anoja Wickramasinghe (Ms)
University of Peradaniya
Dept. of Geography
Peradeniya
Sri Lanka

Robert George Wild (Mr)
c/o Foreign and Commonwealth Office (Grand Turk)
London SW1A 2AH
UK

Lye Yoka (Mr)
c/o UNESCO-Kinshasa
Immeuble Losonia
Boulevard du 30 juin
Kinshasa
Democratic Republic of Congo

ORGANIZING COMMITTEE

CBD

John Scott (Mr)
Programme Officer- Traditional Knowledge
Secretariat of the Convention on Biological Diversity
413 St-Jacques Street, 8th floor, Office 800
Montreal H2Y 1N9
Quebec
Canada

FAO

Parviz Koohafkan (Mr)
FAO
Chief, Land and Plant Nutrition Management Service (AGLL)
GIAHS Programme Coordinator
Food and Agriculture Organization of the United Nations (FAO of the UN)
Room B-765
Viale delle Terme di Caracalla
00100 Rome
Italy

IUCN

Gonzalo Oviedo (Mr)
Senior Advisor, Social Policy
IUCN - The World Conservation Union
28 Rue de Mauverney
1196 Gland
Switzerland

Allen Putney (Mr)
IUCN-Consultant
Leader, Task Force on Cultural and Spiritual Values
P.O. Box 4046
Incline Village
Nevada 89450
USA

UNESCO-IHP

Lisa Hiwasaki (Ms)
Division of Water Sciences
International Hydrological Programme (IHP)
UNESCO
1, rue Miollis
75732 Paris Cedex 15
France

Alexander Otte (Mr)
Division of Water Sciences
International Hydrological Programme (IHP)
UNESCO
1, rue Miollis
75732 Paris Cedex 15
France

UNESCO- MAB

Natarajan Ishwaran (Mr)
Director
Division of Ecological and Earth Sciences
Man and the Biosphere (MAB) Programme UNESCO
1, rue Miollis
75732 Paris Cedex 15
France

Thomas Schaaf (Mr)
Division of Ecological and Earth Sciences
Man and the Biosphere (MAB) Programme UNESCO
1, rue Miollis
75732 Paris Cedex 15
France

Charlotte Herman (Ms)
Division of Ecological and Earth Sciences
Man and the Biosphere (MAB) Programme UNESCO
1, rue Miollis
75732 Paris Cedex 15
France

Cathy Lee (Ms)
Division of Ecological and Earth Sciences
Man and the Biosphere (MAB) Programme UNESCO
1, rue Miollis
75732 Paris Cedex 15
France

UNESCO-WHC

Mechtild Rossler (Ms)
Chief, Europe-North America
World Heritage Centre
UNESCO
7 place de Fontenoy
75352 Paris 07 SP
France

Fumiko Ohinata (Ms)
World Heritage Centre
UNESCO
7 place de Fontenoy
75352 Paris 07 SP
France

Grazia Piras (Ms)
Latin America and the Caribbean
World Heritage Centre
UNESCO
7 place de Fontenoy
75352 Paris 07 SP
France

UNESCO – Division of Intangible Cultural Heritage

Rieks Smeets (Mr)
Intangible Heritage Section
UNESCO
7 place de Fontenoy
75352 Paris 07SP
France

UNESCO – Beijing office

Yasuyuki Aoshima (Mr)
Director, UNESCO-Beijing
5-15-3, Jianguomenwai Diplomatic Compound
100600 Beijing
PR. China

Shingo Ajisawa (Mr)
UNESCO-Beijng
Assistant Programme Specialist for Science, Technology and Environment
5-15-3 Jianguomenwai Waijiao Gongyu, 100600 Beijing
P.R. China

Ramasamy Jayakumar (Mr)
UNESCO-Beijing
Programme Specialist for Science, Technology and Environment
5-15-3, Jianguomenwai Diplomatic Compound
100600 Beijing
PR. China

UNESCO – Beirut office

Joseph Kreidi (Mr)
Programme Officer for Culture
UNESCO-Beirut
Avenue Cité Sportive
P.O.Box 5244
Beirut
Lebanon

UNESCO – Delhi office

Sudha Mehndiratta (Ms)
UNESCO-New Delhi
B 5/29 Safdarjung Enclave
New Delhi
110 029
India

UNPFII

William Langeveldt (Mr)
UNPFII member
Commission for the Promotion and Protection of the Rights of Cultural, Religious and Linguistic Communities
Pretoria
South Africa

Hui Lu (Ms)
The Secretariat of the Permanent Forum on Indigenous Issues
Division for Social Policy and Development
Department of Economic and Social Affairs (DESA)
United Nations
New York NY 10017
USA

Parshuram Tamang (Mr)
Member of the UN Permanent Forum on Indigenous Issues
Putali Sadak
GPO Box: 1366
Kathmandu
Nepal

UNU

Hans van Ginkel (Mr)
Rector of the United Nations University
United Nations University
53-70, Jingumae 5-chome
Tokyo 150-8925
Japan

Itaru Yasui (Mr)
Vice -Rector of the United Nations University
Environment and Sustainable Development
United Nations University
53-70, Jingumae 5-chome
Tokyo 150-8925
Japan

Luohui Liang (Mr)
Academic Programme Officer
Environment and Sustainable Development
United Nations University
53-70, Jingumae 5-chome
Tokyo 150-8925
Japan

Hiroko Nakazawa (Ms)
Environment and Sustainable Development
United Nations University
53-70, Jingumae 5-chome
Tokyo 150-8925
Japan

Shimako Takahashi (Ms)
Environment and Sustainable Development Programme
United Nations University
53-70, Jingumae 5-chome
Tokyo 150-8925
Japan

GENERAL PARTICIPANTS

Baykt Amanbaeva (Ms)
National Academy of Science of Kyrgyz Republic
256a Chui Prospect, Bishkek
Kyrgyzstan 720071

Yuuki Arai (Mr)
Dept. of Renewable Resources
University of Alberta
225-0002
Canada

Marisa Aramaki (Ms)
Ministry of the Environment
Godochosha No. 5
Kasumigaseki 1-2-2
Chiyoda-ku
Tokyo 100-8975
Japan

Diane Bernbaum (Ms)
1846 Capistrano Ave.
Berkeley, CA 94707
USA

Andrew Bignell (Mr)
Dept. of Conservation
59 Boulcott St., P.O. Box 10420
Wellington
New Zealand

Victor Eduardo Alonqueo Boudon (Mr)
Asociación Roble Huacho
International Relations
Gerona N° 640
Chile

Paolo Caridi (Mr)
First Secretary
Delegation of the European Commission in Japan

Acronyms and abbreviations

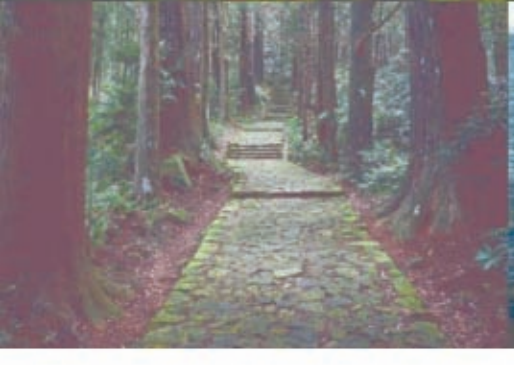
AAA	American Antiquities Act
ACPRO	Ainu Culture Preservation Research Office
AIRFA	American Indian Religious Freedom Act
APINMAP	Asia Pacific Information Network on Medicinal and Aromatic Plants
ASU	Arizona State University
CAP	Conservation Area Planning
CBA	cost–benefit analysis
CBD	Convention on Biological Diversity
CBO	Community Based Organization
CCA	community conserved areas
CEDAW	Convention on the Elimination of All forms of Discrimination Against Women
CERN	China Ecosystem Research Network
CIPSEG	Cooperative Integrated Project on Savanna Ecosystems in Ghana
CIPSH	International Council for Philosophy and Humanistic Studies
COMEST	UNESCO World Commission on the Ethics of Scientific Knowledge and Technology
CSVPA	Task Force on Cultural and Spiritual Values of Protected Areas
DBH	diameter at breast height
DOI (US)	Department of the Interior
EIA	environmental impact assessment
EPA	Environmental Protection Agency
FAO	Food and Agriculture Organization of the United Nations
FOE	Friends of the Earth
FWI	Forest Watch Indonesia
GEF	Global Environment Facility
GFW	Global Forest Watch
GGF	Global GIAHS Fund
GIAHS	Globally Important Ingenious Agricultural Heritage Systems
GPA	government protected areas
GRI	Gran Ruta Inca (Great Inca Highland Road)
IASG	Inter-Agency Support Group on Indigenous Issues
ICCROM	International Centre for the Study of the Preservation and Restoration of Cultural Property
ICH	intangible cultural heritage
ICIB	Instituto para la Investigación y Conservación de la Biodiversidad, Bolivia
ICOM	International Council of Museums
ICOMOS	International Council on Monuments and Sites
ICTM	International Council for Traditional Music
IFAD	International Fund for Agricultural Development
IFAW	International Fund for Animal Welfare
IFI	International Financial Institution
IGU	International Geographical Union
IHP	International Hydrological Programme
ILO	International Labour Organisation
ILTER	International Long-Term Ecological Research
INRA	Agrarian Reform Institute (Bolivia)
IPGRI	International Plant Genetics Resources Institute
ISSC	International Social Science Council
ITI	International Theatre Institute
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
IUCN	World Conservation Union
LIPI	Lembaga Ilmu Pengetahuan Indonesia
MAB	(UNESCO) Man and the Biosphere programme
MDG	Millennium Development Goal
MEA	Millennium Ecosystem Assessment
NAU	Northern Arizona University
NBSAP	National Biodiversity Strategy and Action Plan
NGO	Non-Governmental Organization
NR	nature reserve
NT	Northern Territory of Australia
ODA	Official Development Assistance
OSM (US)	Office of Surface Mining
PGRFA	Plant Genetic Resources for Food and Agriculture
PLEC	UNU Project on People, Land Management and Environmental Change
POI	Plan of Implementation (of the WSSD)
PREP	UNU Pantanal Regional Environment Programme
PRSPs	Poverty Reduction Strategies and related papers
PWCNT	Parks and Wildlife Commission, Northern Territory (Australia)
RAMSI	Regional Assistance Mission to the Solomon Islands
SARD	sustainable agriculture and rural development
SCBD	Secretariat of the Convention on Biological Diversity
SLaM	Sustainable Land Management for Mitigating Land Degradation Enhancing Agricultural Biodiversity and Alleviating Poverty, Ghana
SNS	sacred natural sites
SNSM	Sierra Nevada de Santa Marta
STRP	Scientific and Technical Review Panel (of the Ramsar Convention)
SWAps	sector-wide approaches
TEK	traditional ecological knowledge
TCO	Community Lands of Origin (Bolivia)
TMI	The Mountain Institute
TNC	The Nature Conservancy
UNCCD	UN Convention to Combat Desertification
UNCED	UN Conference on Environment and Development
UNFCCC	UN Framework Convention on Climate Change
UNDP	UN Development Programme
UNESCO	UN Educational, Scientific and Cultural Organization
UNPFII	UN Permanent Forum on Indigenous Issues
UNU	United Nations University
UNU-IAS	UNU Institute of Advanced Studies
USNPS	US National Park Service
WBCSD	World Business Council for Sustainable Development
WCPA	World Commission on Protected Areas
WEHAB	Water, Energy, Health, Agriculture and Biodiversity
WHC	World Heritage Convention
WIPO	World Intellectual Property Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
XTBG	Xishuangbanna Tropical Botanical Garden

Our warmest thanks go to the contributing authors of this publication and all those who have contributed to its making and distribution. We also wish to thank the organizers and partner organizations of the Tokyo Symposium as well as the Government of Japan for their generous financial contribution. Finally, we reserve a special mention to all those who work tirelessly to ensure the conservation of cultural and biological diversity around the world and in doing so ensure that future generations also benefit and learn from this wealth of knowledge and wisdom.

Front cover: main photo - Atitlán Lake and surrounding volcanoes. Besides well-conserved forests in the volcanic chain, this area is home to ancient Maya communities who consider the whole landscape sacred, and also have specific sacred sites for their spiritual ceremonies, mainly in caves and in the top of mountains, Guatemala.
Photos from left to right: Zuni rock art, USA; The healing, rejuvenating and reinvigorating nature of water clearly manifests itself in this ceremony, Japan; Hula Performance at Kilauea Caldera, Hawaii; *Corroboree*: a ceremonial link of spiritual and communal life with landscape and nature through dance and song, Australia.

Back cover: main photo - West Timor, Indonesia.
Photos from left to right: Pilgrimage route (stone pavement and steps), Japan; Altan-Erdeni, spiritual leader of nine Buryat clans, conducts a ceremony of honouring the sacred Lake Baikal, Russian Federation; Mid-winter at Chevak, Alaska

9 789231 040450



Is there a relationship between cultural and biological diversity? In a world moving towards globalization are these diversities under threat and how can we safeguard them? Can sacred natural sites and associative cultural landscapes play a role in conserving both cultural and biological diversity? These and related questions on the interrelationship between the natural and cultural diversity of our planet were addressed at the international symposium on "Conserving Cultural and Biological Diversity: The Role of Sacred Natural Sites" which took place at the United Nations University (*UNU*) in Tokyo from 30 May to 2 June 2005. Organized by *UNESCO* in collaboration with various partner organizations, the symposium provided the floor for presenting case studies on sacred natural sites and cultural landscapes the world over. At the interface of different world views or belief systems and traditional land management schemes, they give testimony to the need for integrated and holistic nature/culture conservation efforts.