



United Nations
Educational, Scientific and
Cultural Organization



Programme on Man and the Biosphere

2005

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1945

Biosphere Reserves

Benefits and Opportunities

**How can we safeguard
both a healthy environment and
a robust economy today and tomorrow?**

**How can quality data be generated
and shared in order to inform effective
decision making?**

**What are the working examples of sustainable
development that we can learn from?**

"UNESCO designation as a biosphere reserve celebrates our local priorities and achievements, the value we place in our natural, historic and cultural resources, as well as our commitment to conserve and foster these resources for future generations."

Georgian Bay Littoral Biosphere Reserve
Inc., Canada, October 2004.

"Pressure on the environment imposed by development has called for harmony between flourishing people's welfare and sustaining the environment. UNESCO's designation as Biosphere Reserves has been a moral support and challenge to maintain such harmony, improve it, and spread it through enhanced cooperation, research and development, and education."

Wahjudi Wardoyo, Secretary-General,
Indonesian Ministry of Forestry, June 2005.



Support for policy makers

Finding effective ways to strike a balance between development and conservation

Policy makers need to ensure better integration of diverse community interests, so that understanding and cooperation are encouraged, and mutual interests and objectives are defined and pursued.

Communities are characterized by often very diverse and at times conflicting interests. Priorities may differ between industries and small scale farming; between individual landowners and public land managers; between multiple levels and sectors of government.

Policy makers are thus challenged to consider these interests while forging policies that are fair and encourage the community's long-term well-being.

This is all the more difficult because many communities are excessively exploiting local natural resources for both local uses and global markets, consequently jeopardizing the resource base for future generations.

Biosphere Reserves

Learning places

Biosphere reserves are designed to bring together a broad range of actors to work cooperatively towards common objectives.

They serve as sites to explore and demonstrate approaches to conservation and sustainable development providing lessons which can be applied elsewhere.

In the 1970s, the Man and the Biosphere Programme of the United Nations Educational, Scientific and Cultural Organization (UNESCO) introduced the biosphere reserve concept: areas proposed by local communities and/or stakeholders and designated by UNESCO to integrate biodiversity conservation (for example, a nature reserve) and economic development.

Biosphere reserves remain under the sovereign jurisdiction of the States where they are situated. They constitute an innovative approach to governance at multiple levels: locally, they are a potent tool for social empowerment and planning; nationally, they serve as hubs of learning for replication elsewhere in the country; internationally, they provide a means of cooperation with other countries, and also a concrete means of addressing international obligations such as Agenda 21, the Convention on Biological Diversity, the Millennium Development Goals, the

Plan of Implementation of the 2002 World Summit on Sustainable Development and the UN Decade of Education for Sustainable Development.

In many different places around the world, projects are underway to enhance people's livelihoods and ensure environmental sustainability, in line with the principles of biosphere reserves. The biosphere reserve concept can serve as a framework to reinforce these projects. UNESCO's recognition can serve to highlight and reward such individual efforts.

Once designated, a site becomes a member of the World Network of Biosphere Reserves, wherein integrated research and monitoring as well as exchange and sharing of experience take place.



Providing a platform for stakeholder cooperation

Challenged with finding a way to resolve long-standing conflicts between tribal, business and private interests, in 2000 the communities of Clayoquot Sound came together in establishing their area as a biosphere reserve.

The Clayoquot Sound

Biosphere Reserve designation has provided a framework for planning sustainable community development. The local economy has shifted from dependence on logging and fishing to a more diversified one that includes tourism, aquaculture, and production of marine and forest products. As the sustainability of the natural resource base is paramount, logging operations are now on a smaller scale, managed

to protect specific landscape features, and committed to hiring displaced local forest workers.

The Clayoquot Biosphere Trust has been established to raise and manage funds for projects on local research, education and training. Its Board of Directors is predominantly composed of representatives of First Nations and local communities. All stakeholders maintain full control over their respective components.

www.clayoquotbiosphere.org

Making room for development and conservation

The Seaflower Biosphere Reserve is an archipelago in the Caribbean Sea with the typical need to balance multiple activities in very confined spaces. Using the biosphere reserve concept as a guide, the authorities engaged all the local people to plan their future on a more sustainable basis.

Like many small tropical islands, the fragile coral reefs, mangroves and forests of the San Andrés archipelago were threatened due to poorly planned urban development, mass tourism and inadequate infrastructures to deal with solid and liquid waste.

As part of the process leading up to the designation of the biosphere reserve in 2000, CORALINA, an office of the Ministry of the Environment, organized a special programme of education, public awareness and community involvement. The primary goal was to develop an understanding within the community about the philosophy and approaches of biosphere reserves and its implications in cultural, environmental and economic terms.

Thanks to this successful campaign, the local communities have designed their own administrative structure and programmes for the Seaflower Biosphere Reserve, with emphasis on ecotourism, revitalizing traditional subsistence agriculture and artisanal fishing. The name "Seaflower" comes from the name of the ship that brought some of the islanders' ancestors from Europe in the 17th century.

www.coralina.gov.co

Clayoquot
Sound
Biosphere
Reserve,
Canada

Seaflower
Biosphere
Reserve,
Colombia

Photo: Stem Boychuk

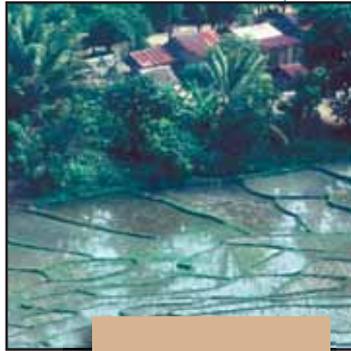
As of September 2005, there are **482** biosphere reserves in **102** countries.

About **15 to 20** biosphere reserves are designated each year.

Rice or forests vs. rice AND forests

The Mananara Nord Biosphere Reserve has gained international recognition for its innovative approach to managing biodiversity conservation, buffer zone development and local community involvement.

From the outset, the emphasis was on acting on local people's priorities, which meant improving health and well-being (such as increased rice yields, better medical care and education). Projects were developed to address those priorities within the context of also improving nature conservation.



Mananara Nord Biosphere Reserve, Madagascar

The approach taken

has been to relieve pressure on the biosphere reserve core areas of forest by improving the living conditions of the rural population and modifying unsustainable resource uses. The approach has emphasized technologies and practices that local people could afford to use (such as small scale chicken farming); targeting women's groups; providing micro-credits; and ensuring technical support from national scientists. This experience served as a base for the environmental action plan of the entire country.

www.unesco.org/mab/capacity/

madagascar/index.htm

Photo: Dominique Roger/UNESCO

Providing a 'brand name' to improve local economies

Biosphere reserves encourage economies that are based on the sustainable and wise use of regional natural and human resources; they foster a long-term perspective and strive for economic stability based on efficiency, diversity and equity. They promote income and employment opportunities and the balance between consumption and production.

The success of the Entlebuch Biosphere Reserve is due to a 'bottom-up' approach: the community created a shared vision for the future development of the area, linking economic development, environment and culture.

Companies that meet specified criteria

are allowed to use the Entlebuch Biosphere Reserve quality label on their products, such as cheese and timber, giving the producers a distinct marketing advantage. The label is increasingly being preferred by customers as it indicates products that are both environmentally friendly and locally grown. About 200 goods and services are already certified to carry the label.



Entlebuch Biosphere Reserve, Switzerland

Photo: Felder-Casagrande

www.biosphaere.ch

Who pays for biosphere reserves?

EVERYONE

- The level of funding needed depends on the nature and extent of the projects and activities undertaken.
- Often, additional funding is not needed, rather existing budgets need to be aligned to meet shared goals. Industry, tour operators, charitable foundations, research funding agencies, governments, local municipalities can all help.
- Continual support from government – even only moral and technical – ensures good connections with national policy and international efforts related to sustainable development.
- UNESCO can provide advice and occasionally seed funds to initiate local efforts; it can help broker projects or set up durable financial mechanisms.

Good science, better decisions

Scientific information is essential for policy makers and their constituents, informing them on environmental and developmental issues, as well as serving as a basis for broader global assessments.

The World Network of Biosphere Reserves (WNBR) provides **an effective scientific support structure**, as it features worldwide coverage of representative ecosystems and agreed objectives for carrying out research and monitoring.

The network promotes the use of **harmonized methodologies** through the Biosphere Reserve Integrated Monitoring (BRIM) programme, as well as exchanges of experience via national, regional and thematic networks.

**Changbaishan
Biosphere Reserve,
China**

For example, the Changbaishan Biosphere Reserve in China participates in the national Chinese biosphere reserve network, the regional East Asian Biosphere Reserve Network (primarily focused on ecotourism, conservation policy and transboundary conservation) and the thematic programme of Global Change Research in Mountain Biosphere Reserves.

[www.unesco.org/mab/
mountains/home.htm](http://www.unesco.org/mab/mountains/home.htm)

Friendly neighbours

A logical extension of the biosphere reserve concept, transboundary biosphere reserves help to coordinate biodiversity conservation efforts of adjacent countries within a context of political will to build peaceful relations.

For example, Poland, Slovakia and Ukraine worked together to establish the East Carpathians Transboundary Biosphere Reserve and to develop an innovative funding mechanism: a non-profit foundation and an environmental trust fund with the task to support transboundary cooperation and common activities in the region. The John D. and Catherine T. MacArthur Foundation and the World Bank's Global Environmental Facility provided funding and WWF provided design and legal assistance for its establishment.

The Foundation for Eastern Carpathians Biodiversity Conservation (ECBC)'s goal is to "encourage, organize, conduct and promote activities serving to protect the overall biodiversity of the Eastern Carpathians Mountain zone".

www.unesco.org/mab/br/

focus/2003March/Trilateral.htm

Sharing results, ideas and resources:

the World Network of Biosphere Reserves

Reviving local livelihoods, reducing the environmental footprint

In the desert lowlands of Jordan, communities are using local resources in new sustainable ways, bringing back life to abandoned villages.

In Dana, Jordan, the major thrust has been the development of income-generating schemes which encourage alternative and sustainable land use: organically-produced agricultural products, medicinal herbs as cash crops, reinvigorating the jewelry industry based on products from the biosphere reserve, nature-based tourism. Traditional stone houses are rebuilt, terraced gardens restored.

These and other initiatives are bringing increased jobs and income to locals while building a 'brand name' based on conservation.

Underpinning the whole process has been an agreement to work together – local villages, government agencies, tourism and other business concerns, scientific and conservation institutions.

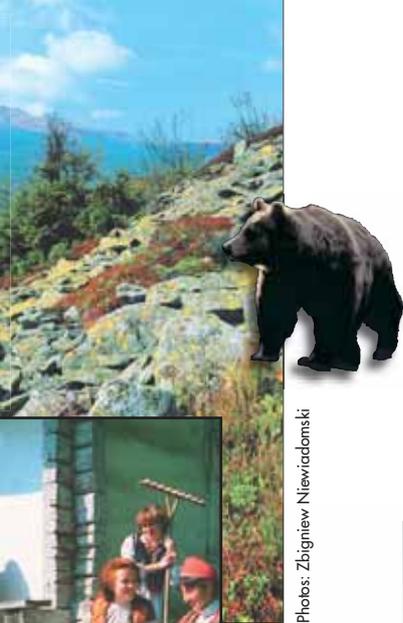
www.rscn.org.jo/

CONSERVATION

of biodiversity (ecosystems, species, genes)

DEVELOPMENT
for a
sustainable future

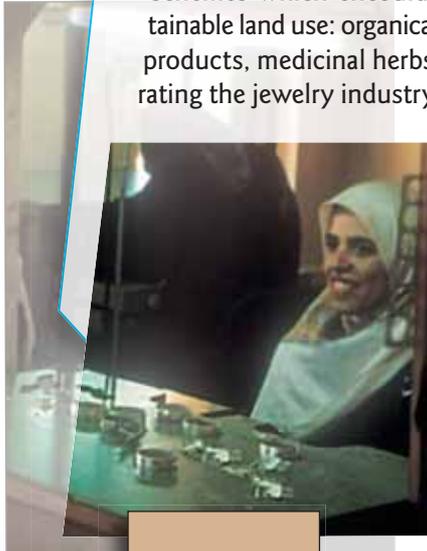
**RESEARCH and
MONITORING**
in a world network



Photos: Zbigniew Niewiadomski

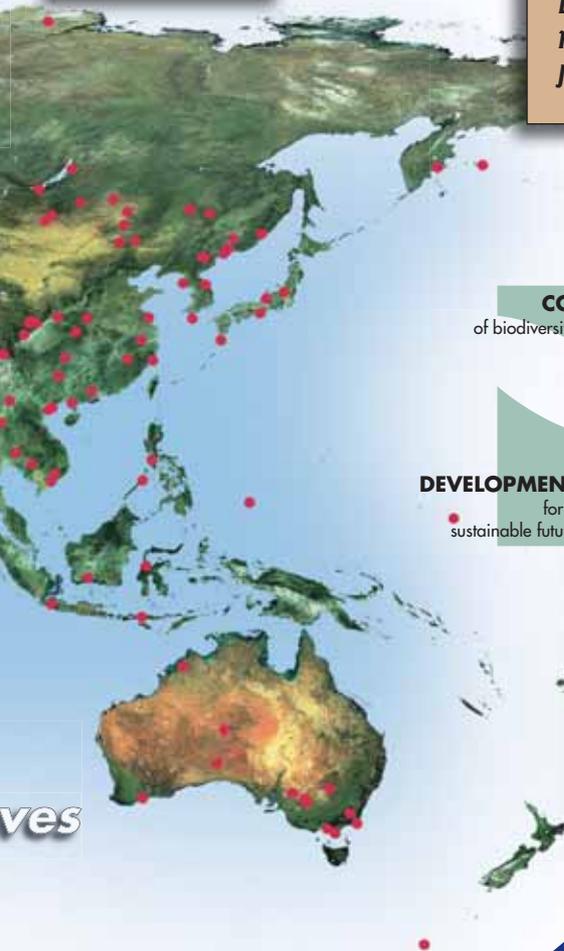


Photos: Thomas Scharaf/UNESCO



**Dana
Biosphere
Reserve,
Jordan**

**East
Carpathians
Transboundary
Biosphere
Reserve,
Poland,
Slovakia
and Ukraine**



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