

Taonga Pasifika

WORLD HERITAGE IN THE PACIFIC



WORLD HERITAGE COMMITTEE 2007
31st Session, Christchurch, New Zealand



Department of
Conservation
Te Papa Atawhai



Australian Government
Department of the Environment
and Water resources

Glossary

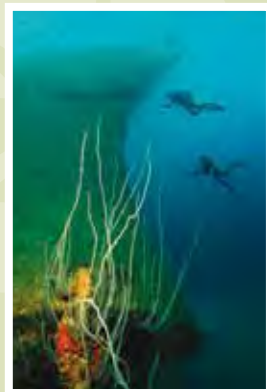
akua	gods	Hawaiian
'aumakua	guardian spirits	Hawaiian
fonualoto fa'itoka	burial vault	Tongan
kiore	Pacific rat	Maori
kūmara	sweet potato	Maori
langi	royal tombs	Tongan
laulau ai	dining table	Samoan
lupe	pigeons	Niuean/Samoan
marae	meeting house	Maori
matai	chief	Samoan
naflak	political system	Vanuatu
nofoa papa	chair	Samoan
'ohi	to gather	Hawaiian
pä	fortified settlement	Maori
peka	bats	Niuean/Tongan
pu	sea shell trumpet	Hawaiian
rai	whale	Yapese
rahui	reserves	Niuean
siapo	bark cloth	Samoan
tapa	bark cloth	Polynesian origin
tanoa faiava	bowl buried in sand	Samoan
taonga	treasures	Maori
tapu	taboo	Polynesian origin
taoga	treasures	Niuean

Contents



Front cover image: Masked Booby
(*Sula dactylatra*)
Photo: C. Grondin

Introduction	2
Message from Tumu te Heuheu	3
Voyaging	4
The Pacific's Crested Voyager	5
Voyaging for Stone Money	6
Adaptation	8
Kuk—origins of agriculture in the Pacific	10
Lapita—Pacific ancestors	11
Marae Taputapuatea	12
Ha'amonga 'a Mau'i—the Tongan trilithon	14
Lapaha Tombs—a link with Tonga's ancient royal heritage	15
Chief Roi Mata's Domain—a journey through life and legend	16
Tapu Cloth	17
Nan Madol—sacred islets of Pohnpei	18
Rapa Nui's Magnificent Moai	20
Map of the Pacific	22
Levuka—a colonial Pacific port	24
Hawai'i—people of the land	26
Fagaloa Bay—Uafato/Tiavea Conservation Zone	28
Living their Ancestors' Lives	30
Huvalu Forest	31
New Caledonia's Sea of Treasures	32
East Rennell	34
Kakadu National Park—indigenous management	36
For the Good of Mankind	38
New Zealand's World Heritage Sites	40
Country Profiles	42



Introduction

Kia orana, ni sa bula, fakaalofa lahi atu, malo e lelei, halo olaketa, la orana, kia ora, talofa lava, kam na mauri and welcome to *Taonga Pasifika*.

The Pacific Ocean is the largest geographical feature on earth. It spans a third of the earth's surface, covering 16.5 million square kilometres. More than 20 000 islands are dotted throughout this massive ocean, the majority of which are small coral atolls. Many of the Pacific's thousands of islands are separated from their neighbours by vast expanses of water. Easter Island (Rapa Nui, Isla de Pascua) in the eastern Pacific is one of the most remote places on earth, lying 3500 km west of Chile and 2000 km east of its nearest neighbour, Pitcairn Island.

The stories that follow are drawn from this immense region—from mainland Papua New Guinea to the northern atolls of the Marshall Islands and the eastern archipelagos of French Polynesia. They explore the distinctive ways in which Pacific peoples adapted to the islands they came to inhabit and utilised new resources.

Despite the great distances that separate the islands of the Pacific, the cultures are intricately connected. For example, Lapita pottery that is found in Vanuatu has been linked to similar artefacts found thousands of kilometres away in Samoa. As well as showcasing exceptional places, these stories highlight the way in which the people of the Pacific relate to their surroundings, and the individual and collective histories that make the region so unique.

In *Taonga Pasifika*, you will learn about early astronomical knowledge in Tonga, be reminded of the Pacific's colonial history in Fiji and discover the world's second largest coral reef, surrounding one of the world's largest lagoons, in New Caledonia.

A shared distinctive feature of Pacific cultures is the making of tapa (bark cloth). Tapa cloth, which is both utilitarian and ceremonial in function, has become a symbol of the region that links the Pacific nations.

Taonga Pasifika not only introduces the amazing history and culture of the Pacific, but also highlights the more recent efforts to preserve the region's natural and cultural heritage. The articles about East Rennell, in the Solomon Islands, and Kakadu National Park, in Australia, illustrate the relationship between traditional land ownership and World Heritage sites, while Niue's story demonstrates the importance of managing local resources.

Many of the following stories were gathered at a Pacific World Heritage workshop held in Turangi, New Zealand, in early 2007. The workshop was a follow-up to an earlier World Heritage workshop in 2004, and is part of the implementation of the Pacific 2009 Action Plan—a plan designed to guide World Heritage work in the Pacific through to 2009. The workshop focused on how people of the region can work together to improve global recognition of World Heritage in the Pacific, and the need for the international community to support a Pacific World Heritage Fund.

The stories represent only a small portion of the myriad narratives about the region and its people, but highlight many of the extraordinary places of universal value in the Pacific. Some of these places are already World Heritage sites, some are on tentative lists and some are yet to be introduced to World Heritage.

From the western waters of Palau and the Federated States of Micronesia to Easter Island's magnificent statues in the east, and from the wild Hawaiian volcanoes in the north to New Zealand's sleeping volcanoes in the south, welcome to this journey through the Pacific.

Message from Tumu te Heuheu

Ko Tongariro te maunga
Ko Taupo-nui-a-Tia te moana
Ko Ngati Tuwharetoa te iwi
Ko Te Heuheu te tangata

It is a great pleasure for me to welcome our international visitors to the 31st session of the World Heritage Committee in Christchurch, New Zealand.

One of my goals for this meeting is to showcase the natural and cultural beauty of the Pacific region. This is important, as I believe there is currently only a limited awareness of Pacific heritage outside the region. Furthermore, the special and unique characteristics that make up the Pacific region are not adequately represented on the World Heritage list.

There is an enormous wealth of cultural diversity in the Pacific, and traditional heritage management practices reinforce the inseparable relationship between communities, cultures and the environment.

Heritage in the Pacific is strongly linked to 'indigeneity'. It defines our cultural identity and is inseparable from our social, economic and environmental well-being. Our heritage is holistic, embracing all life, both tangible and intangible, and is understood through our cultural traditions.

As you will learn in the following pages of *Taonga Pasifika*, the Pacific region contains a series of spectacular and highly valued natural features and cultural places. These places are related to the origins of the people, the land and sea, and other traditional stories.

Taonga Pasifika is a gift to you from the Pacific region and tells stories of who we are and about the natural and cultural heritage that is important to us. Through reading these stories, I trust you will gain a greater appreciation that protection of Pacific heritage must be based on respect for, and understanding and maintenance of, the traditional cultural practices, indigenous knowledge and systems of land and sea tenure in the Pacific.

I also hope that you take away the message that the identification, management and conservation of World Heritage sites must actively involve local, traditional and indigenous people and communities. It is clear that linking communities to heritage protection is a 'win-win' scenario.

Tumu te Heuheu with children
at Uafato Village, Samoa
Photo: Tata Lawson



VOYAGING

Despite its beauty, the Pacific can be a challenging place to live. Islands are separated by enormous distances; smaller atolls have limited land and water resources; and cyclones, droughts and floods are all persistent threats. These limitations were overcome by Pacific peoples thousands of years ago through the adoption of many new and innovative



Orou double canoe under sail.
Mailu, 1932

technologies, and by the integration of these technologies into their cultures.

Foremost among the technologies that were needed to settle the Pacific were those linked to voyaging and navigation. Navigating the immense distances between islands on a regular basis was an extremely challenging task, especially since early sailors relied solely on wind and currents for propulsion, and on oral and cultural tradition for navigation.

Pacific navigation was not limited to occasional, risky voyages of discovery. Well-known trade routes were established very early in the history of the Pacific. Volcanic obsidian, which was found only on the island of New Britain near Papua New Guinea, was being traded by sea as early as 20 000 years ago. The recent finding of obsidian in Fiji, dating from perhaps 3000 years ago, provides evidence of a trade route between New Britain and the islands of Fiji.

In the Federated States of Micronesia, the Yapese people regularly travelled 600 km to the island of Palau, where they established camps and quarried limestone discs, which they used as a form of money. This stone money was eventually developed to 1 m or more in size, and was transported between Yap and Palau into the 19th century.

To assist them in their voyaging, Pacific sailors relied on a number of tools. Foremost was their knowledge of the wind, currents, tides and stars along a particular route. In some Pacific cultures, this knowledge was maintained within specific families or clans who were then responsible for handing the skills on through their children. These navigators recalled the particular combination of features at particular times of the year at particular stages in their journeys to give them an accurate understanding of their location.

The depth of knowledge required to safely navigate across the open ocean, and the skill and stamina needed to use it on a long voyage, was a remarkable cultural and personal achievement. To help them, some cultures also developed physical tools, such as star maps, which were made on woven frames, and used shells and coral to mark the position of stars.

In the past 30 years, traditional voyaging cultures and technologies have been rediscovered in the Pacific. In some cases, such as the building of the Hokule' canoe in Hawai'i in the mid-1970s, the rediscovery of voyaging has been a powerful factor in strengthening traditional cultures in the face of pressure from modern society. Large voyaging canoes have now been built in many Pacific nations, including Hawai'i, Tahiti, Rarotonga and New Zealand. In 1995, a fleet of these canoes converged on Taputapuatea in Tahiti to celebrate the tradition of the Fa'atau Aroha—the Friendly Alliance of ancient Polynesian peoples.

THE PACIFIC'S CRESTED VOYAGER

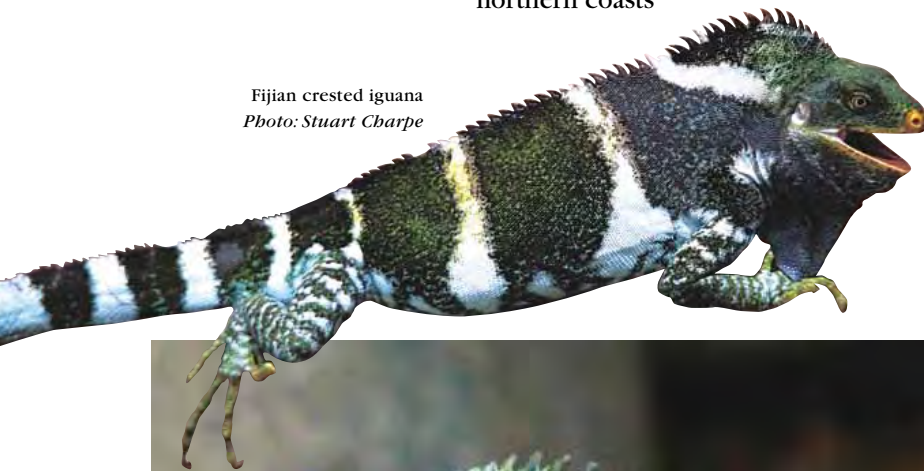
One of the Pacific's smallest voyagers does not have a tradition of navigation or cultivation, and turns dark green when it feels threatened.

The crested iguana (*Brachylophus vitiensis*) did not plan to voyage to Fiji from South America, but probably got caught on a raft of vegetation that floated across the Pacific on the currents and winds. Today, this rare iguana is restricted to nine small islands off the western and northern coasts

of Fiji's two largest islands, Viti Levu and Vanua Levu. It is a unique example of how terrestrial biodiversity can spread across enormous distances to establish in new environments.

On six of the nine islands on which it lives, the crested iguana is still threatened by cats and goats. However, on Yadua Tabu Island, as many as 10 000 iguanas survive in a habitat free of cats and goats. The 70-ha island is managed by the National Trust of Fiji through a long-term lease from its traditional owners who live on an adjacent island. With community support, goats have been eradicated and there has been no burning or disturbance for 15 years. Yadua Tabu Crested Iguana Sanctuary and its iconic 1-m-long crested iguanas are on Fiji's tentative list for World Heritage status.

Fijian crested iguana
Photo: Stuart Charpe



Fijian crested iguana
Photo: Dr Peter Harlow, Taronga Zoo

VOYAGING FOR STONE MONEY

For over 500 years, the people of Yap in the Federated States of Micronesia have used a form of stone money in ceremonial exchanges. The stone discs—some as large as 3 m in diameter—are remarkable not only for their size but for the fact that they were transported more than 600 km by sea from Koror State in Palau where they were quarried. This continuous history of quarrying, voyaging and their related cultural practices needs to be marked by a serial World Heritage listing.

The stone disc money was originally about 30–40 cm in diameter and 3–6 cm thick. It was quarried from the walls of coral limestone caves in the Rock Islands of Palau. The caves are no more than 3–4 m deep and are usually found at sea level, making them easily accessible. The

limestone was cut using stone tools, a difficult and time-consuming task, and was then rafted back to Yap.

The money is said to have originated from an occasion when Yapese fishermen were blown off course to Palau. There they found the stone, which they carved and took back to their home villages. The original carving is said to have been in the shape of a whale or rai, which is the local name for the money.

The value of the stone money is not fixed, but instead is related to the rites of its production and transport, and the customs and history of its use—thus its value can change over time. In this regard, the money can tell the story of a village and the hardships of the people who quarried it. Often the stone money was used to purchase prestige goods, such as

Mangyol stone money bank
on the island of Yap, Federated
States of Micronesia
Photo: Scott Fitzpatrick





Mangyol stone money bank
on the island of Yap, Federated
States of Micronesia
Photos: Scott Fitzpatrick

land or homes, in a similar way to the fine woven mats of Samoa and Tonga that are used as tokens in social and ceremonial transactions.

In Yap, ownership of the stones is publicly known and some of the money is publicly displayed on dancing grounds, which are raised stone platforms that may be some distance from the owner's residence. Several of these grounds at Mangyol and Bleyrach constitute part of the proposed serial site. The discs are pierced in the middle, allowing them to be carried using poles. If ownership of the larger stone money is transferred, this is often done in public at the dancing grounds. Smaller discs may be kept in people's homes.

The arrival of Europeans changed the way stone money was made and transported. The introduction of metal tools and the provision of transport by ship resulted in the size of discs increasing to as much as 3 m in diameter in the late 19th century. Although modern transport methods were introduced, traditional voyaging technology and knowledge was maintained among the Yapese people, and by the 1960s they were the last holders of an unbroken tradition of oceanic voyaging in the Pacific.

The knowledge of voyaging techniques

probably survived in the Federated States of Micronesia because regular travel between the many small islands was common. In contrast, the distances between islands in the western Pacific were so great that once voyaging was interrupted it ceased forever. Amongst the techniques maintained were the design and construction of canoes, oral traditions of navigation and the making of wooden star charts. The rediscovery of these traditions in the 1970s was vital to the rebirth of voyaging across the Pacific.

The preservation of this serial site, which is on the tentative lists of both Palau and Federated States of Micronesia (Yap state), is important for the recognition of the relationship between the people of both countries. The people of Palau and the Yapese voyagers developed good relationships over a period of hundreds of years. Today the caves are well protected by local chiefs on Palau who are reluctant to have people visit them. On Yap, the dancing grounds where money is stored are also protected by the local municipality. Both communities recognise the importance of the continuous contact between their cultures, and maintain the relationship through participation in festivals and ceremonial visits.

ADAPTATION

An important part of the story of civilisation in the Pacific is the way indigenous people adapted crops and technologies to the new homes in which they settled, and the effects these adaptations had on the local ecologies. Early voyagers moved across the Pacific carrying with them a suite of domesticated crops and animals, and techniques for their cultivation and husbandry. Some of these crops and techniques originated in

Gardens on traditional village site, Babeldaob, Palau
Photo: Kevin Jones



sites such as Kuk in Papua New Guinea as long as 6000–7000 years ago, and were transported from the Solomon Islands all the way to Samoa by the Lapita people between 2500 and 3000 years ago.

The effects of introducing new crops were threefold. Firstly, these new crops and animals changed the ecology of the islands to which they were introduced. Secondly, Pacific peoples adapted their crops, animals and techniques to the different climates, soils and seasons of their new homes. Lastly, the cultures of the people changed in response to the new ways of making a living.

The type of agriculture that developed at sites such as Kuk was based on a warm, stable climate and relatively fertile land. Larger Pacific islands, such as the volcanic islands of Samoa, were sufficiently similar that they could also support the introduction of these crops and techniques. However, smaller islands, such as the coral atolls of the Marshall Islands, were less fertile; this, combined with their limited land area, meant that they were unable to sustain their populations based on agriculture alone. Consequently, in these islands, fishing, shell fishing, and the gathering of seabirds, turtles and other marine life became essential for providing enough protein for the communities to survive.

The arrival of people with crops, cultivation methods and introduced animals led to major changes to the ecology of these islands. The Pacific rat (kioire, *Rattus exulans*), which travelled with voyaging people, is associated with the extinction of many bird species. The hunting and gathering of birds and animals by pre-European communities also contributed to the extinction of many species. In some cases, deforestation, as a result of harvesting or burning for cultivation, contributed to soil erosion and extinctions. However, in other places, such as Manono and Apolima Islands in Samoa, it enabled communities to develop plantations and gardens that have sustained them for many generations.



Fortified and terraced hilltop,
with modern gardens,
Babeldaob, Palau
Photo: Kevin Jones

The establishment of maritime lifestyles also promoted the development of fishing and voyaging technologies. Fishing techniques and types of fishhooks changed depending upon the type of island environment people were living in. For example, the size and shape of hooks varied depending upon whether people were fishing in coral lagoons (in which case a curved hook was used, as it was less likely to get caught in the coral) or in the open ocean (where a sharper 'jabbing' hook was more useful). Cultivation techniques also changed as people spread across the Pacific. When people reached islands such as Easter Island (Rapa Nui, Isla de Pascua) or New Zealand (Aotearoa) they began to move into subtropical and temperate zones

with cooler, windier climates. Tropical crops found it harder to survive in these conditions, so Polynesian people used cultivation techniques such as the building of stone-walled gardens to protect plants from oceanic winds, or mounding to maintain increased temperatures and fertility. In New Zealand, staple foods such as banana and breadfruit would not grow, and the cultivation of kumara (sweet potato) was reliable only in the north. However, bird and ocean life was abundant, so the culture adapted to using these resources. Without this constant process of adapting technologies and culture to their environments, Pacific peoples would not have ultimately reached and settled the whole of this immense ocean.

KUK—ORIGINS OF AGRICULTURE IN THE PACIFIC

Papua New Guinea is well known for its magnificent plant and animal biodiversity. It is less well known for being one of the first places on earth, alongside the Fertile Crescent of the Middle East and the Yangtze and Yellow Rivers of China, to develop settled agriculture.

As early as 10 000 years ago, there is evidence of exploitation of tubers such as taro and yam at the Kuk site in the Upper Wahgi Valley of Papua New Guinea. Between 6400 and 7000 years ago, the people of Kuk developed agricultural practices focused around the cultivation of bananas. From 4000 years ago there is archaeological evidence of the periodic drainage of swamps using ditch systems.

These agricultural systems make Kuk significant both globally and regionally as an early and independent site of an important technological development in the history of humanity.

The agricultural practices developed in Kuk were also important in the spread of present-day cultures across the Pacific. Agriculture in New Guinea and the Pacific is based on the propagation and cultivation of plants such as banana, taro, yam and grasses such as sugarcane. The agricultural practices found at Kuk, such as mounded cultivation, spread across the Pacific with successive waves of migration. The Lapita people, whose earliest sites are found in the islands of the Bismark Archipelago adjacent to Papua New Guinea, transported these practices across the Pacific.

Today, the Kuk site is occupied by the Kawelka clan group, who continue a 10 000-year tradition of land management. Community support from the Kawelka clan for the listing of Kuk as a World Heritage site is vital to the proposal. This proposal has been important for the local community because it has led the Government and the Kawelka clan to negotiate an agreement about ownership and responsibilities for the property.



Cordyline on bank with taro behind
Photo: Kevin Jones

LAPITA—PACIFIC ANCESTORS

Approximately 2500 years ago, a remarkable episode of human colonisation took place in the Pacific, when the makers of a unique, highly decorated style of pottery, known as 'Lapita', spread out from the southern tip of the Solomon Islands to become the first human inhabitants of remote Oceania. In West Polynesia, these first inhabitants were the ancestors of modern Polynesian peoples.

The earliest evidence of Lapita ceramics is dated to around 2900 years ago and can be found in archaeological sites on the Bismarck Archipelago, islands that bridge eastern Papua New Guinea and the northern Solomon Islands. Archaeologists believe it was from this area that the Lapita people spread rapidly across thousands of kilometres of ocean in a wave of expansion that established the first settlements in Vanuatu, New Caledonia, Fiji, Tonga and Samoa within a period of only a few hundred years.

Lapita pottery is highly visible in archaeological sites, enabling archaeologists to interpret the timing and direction of these early seafaring people. Much of the pottery in the sites is plain earthenware, but a small percentage has the characteristic and unmistakable decorative

motifs of Lapita, named after the site in New Caledonia where the pottery was first discovered. Some have argued that the designs seen on the pottery are precursors to those on modern tapa cloths and even in traditional tattoo designs.

Perhaps more important to the long-term survival of the Lapita people and their descendents was their knowledge of domesticated food crops that they took with them to provide food resources on newly colonised islands. Their highly sophisticated knowledge of navigation and seafaring, fishing and other oceanic resources was also essential. The Bismarck Archipelago, where evidence of Lapita culture was first found, is adjacent to New Guinea, where tree and root crops such as banana and taro had long been domesticated—evidence from the Kuk early agricultural sites in the Wahgi Valley suggests that this may have been as early as 7000 years ago.

Lapita archaeological sites are often linked either directly or indirectly to proposed or potential World Heritage sites in the Pacific because they represent tangible evidence of a unique and outstanding episode of human colonisation. The presence of Lapita sites in island nations across the western Pacific offers great potential for a trans-boundary serial World Heritage nomination that would reflect both the route taken and the ingenuity of these people as they first explored the unknown waters and islands of the Pacific.

Voyaging across the Pacific in the centuries before the height of the Roman Empire, the Lapita people and their culture laid the foundations for human life in the Pacific. As their technology, crops and animals spread across the region, a process of cultural adaptation to island environments began that led directly to the cultures of today.

Lapita pottery fragment
1000 BC, Solomon Islands
*Photo: Courtesy of the
Anthropology Photographic
Archive, Department of
Anthropology, University of
Auckland*



MARAE TAPUTAPUATEA

The stone marae at Taputapuātea and the associated complex of features is one of the most important Polynesian cultural sites in the Pacific. The site is central to Polynesian mythology and religion, and to technologies such as oceanic voyaging. Marae Taputapuātea is found on the island of Rai'atea, which is part of the Society Islands in French Polynesia. It is a large site of approximately 60 ha and comprises an association of traditional Polynesian elements, including a mountain, a river, a ceremonial complex of stone platforms and a pass between the reefs.

Rai'atea has the reputation of being a cradle for Polynesian culture. In ancient times it was called Havai'i fanau'ra fenua (Havai'i the cradle). In mythology, fragments of Havai'i broke off to create other islands, and the name is reflected across the Pacific in places such as the

Hawaiian Islands, Avaiki (now the Cook Islands), Havai'i (now the Marquesas Islands) and Savai'i (now Samoa).

From around the 16th century, Rai'atea became a religious centre for the worship of the Polynesian god of war, Oro. It was around this time that the Tamatoa dynasty built the main part of Marae Taputapuātea, although earlier marae may also have existed on the site. The marae was the site of royal coronations for the Tamatoa dynasty, and a large standing stone, 2–3 m high, remains to mark the site where investitures occurred.

Marae Taputapuātea was considered sacred by worshippers of Oro, and became a centre of worship, knowledge and religion for Polynesians across the central Pacific. Priests from other islands voyaged to Rai'atea, where they participated in rituals and ceremonies,

Marae Taputapuātea
Photo: R. Ariibau Tubeiava





Marae Taputapuātea
Photo: R. Ariibau Tubetiava

including prayers, offerings and sacrifices. Priests, explorers and warriors spread these rituals and knowledge across the Pacific, helping to create a shared Polynesian theology.

Practices developed at Taputapuātea link it both physically and spiritually with marae throughout the Pacific. One such tradition is the use of a stone from Taputapuātea as the foundation for new marae on other islands. An echo of this tradition can be found in New Zealand, where it is believed that soil from Taputapuātea was brought in the canoe of the Tainui tribe and used to establish an altar at their landing spot at Kawhia. A Maori proverb captures this idea in the words 'E kore au e ngaro; te kakano I ruia mai Rangiatea'—'I shall never be lost; [I am] the seed which was sown from Rangiatea'.

One of the most important features of Taputapuātea is its association with voyaging. In Tahitian culture, the marae

symbolises a stone canoe remaining on land after a long voyage. In oral tradition, voyagers returning to Rai'ātea had to raise their oars as a symbol of peace as they entered the sacred passage through the reef known as Ava-moa. Since the renaissance of Polynesian navigation and sailing traditions in the 1970s, canoes from Hawai'i, New Zealand and Rarotonga have voyaged to Taputapuātea as a way of restoring Pacific traditions and heritage. The marae complex itself covers 2 ha and is composed of 11 stone platforms. Associated with it are dwelling platforms, farming terraces and workshops. It is the biggest marae site in French Polynesia and one of the largest in the Pacific. Recognition of Taputapuātea as a site of outstanding universal value would acknowledge its central place in Polynesian religion and culture, and would materially assist in the protection and preservation of its heritage for years to come.



Ha'amonga 'a Mau'i
Photo: Paul Dingwall

HA'AMONGA 'A MAU'I—THE TONGAN TRILITHON

The Ha'amonga 'a Mau'i (Burden of Mau'i) is a huge coral gateway or monumental arch that was constructed in the 13th century by civil engineers at the time of the 11th Tu'i Tonga (paramount ruler), Tu'itatui. It aligns the astronomy of the heavens and the island of Tongatapu, mirroring the astronomical function of its northern hemisphere counterpart, Stonehenge. The monolithic celestial platform permitted the Tu'i Tonga to decipher the heavens and forecast weather patterns, providing the Tongan admiralty with much-needed weather information.

Made of three slabs of coral—two upright, and the third resting in a notch across the top—the arch is about 4–5 m high and 6 m wide.

Some believe that Tu'itatui may have built the structure to symbolise his two sons and the bond between them. In 1967, King Tupou IV endorsed the theory that the trilithon was an ancient astronomical instrument used to predict the summer and winter solstices and the equinoxes. In

1972, he declared it and the surrounding area a protected historical park.

Oral traditions record that Tu'itatui ordered that the stone for the Ha'amonga 'a Mau'i, and for other large coral columns nearby, be brought from distant islands. The Ha'amonga 'a Mau'i is located in the earlier Tu'i Tonga settlement site of Heketa. In the 13th century, the Tu'i Tonga moved the capital from the Ha'amonga area to Lapaha, where it remained until the 19th century.

The Ha'amonga 'a Mau'i, which is located along the noisy shores of 'Utulongo'a, and the royal Lapaha tombs (langi), which are found along the inner lagoon, fanga ko longonoa, are inseparable. The Ha'amonga 'a Mau'i established a scientific phenomenon that remained undiscovered for almost 800 years. The tombs were constructed by civil engineers who understood the sound architectural principles of strong rock footing foundations. Together these sites are a candidate for Tonga's World Heritage tentative list.

LAPAHA TOMBS—A LINK WITH TONGA’S ANCIENT ROYAL HERITAGE

The ancient royal tombs (*langi*) at Lapaha in Tonga comprise one of the great ceremonial sites of the Pacific. Along with sacred monuments such as Roi Mata’s domain in Vanuatu or the tombs of Nan Madol in the Federated States of Micronesia, the Lapaha tombs symbolise the association between political and spiritual power that was held by royalty and high chiefs in the Pacific. As a cultural landscape, these massive coral structures provide a link to the Tongan dynasties that created a huge maritime empire in the Pacific in the 12th to 15th centuries.

The link of Lapaha with Tongan history begins around the 13th century, when the paramount rulers, known collectively as the Tu’i Tonga, moved the capital from the Ha’amoana area to Lapaha, where it remained until the 19th century. Between the 12th and 15th centuries, Tongan navigators and warriors were actively exploring the Pacific, establishing trade routes and military dominion over an empire that stretched from Niue in the east to Tikopia in the Solomon Islands, and controlled large island groups such as Fiji and Samoa.

The construction of the massive tombs was used to demonstrate the spiritual and political power of the Tu’i Tonga. The tombs were built from huge slabs of carefully cut coral transported from neighbouring islands, or in mythology from far islands in the empire such as

Uvea (Wallis), which is hundreds of kilometres from Tonga. Once the coral structure was completed, the body of a Tu’i Tonga, or allied high-ranking chief, was placed in a burial vault (*fonualoto fa’itoka*) inside the tomb, which was then covered with black volcanic pebbles.

The rituals that surrounded and continue to be used for burial are remarkable in themselves. Royal undertakers, the *ha’atufunga*, are responsible for the burials, including rituals such as the washing and anointing of stones (*lanukilikili*). Stones for the tomb are selected by a *ha’atufunga* and then washed to remove seawater. They are then anointed using sweet oil from the *mohokoi* flower or *siaipasi* tree. Children of the royal line later arrange the stones on the tombs. A separate clan of caretakers, the *Ha’a Ma’u*, is responsible for the upkeep of the tombs and keeping the history of those who are buried there.

The site itself is just over 3 ha in size and contains around 28 tombs. Like many other important sites in the Pacific, the area around Lapaha is also a site of early Lapita settlement. Unlike other burial sites in the Pacific, the tombs and the rituals surrounding royal burial are still part of Tongan culture, and were most recently used in 2006 for the burial of Prince and Princess Tu’ipelehake. This cultural landscape is a remarkable living link with ancient Tongan royal heritage and culture.

Lapaha royal tombs
Photo: Paul Dingwall



CHIEF ROI MATA'S DOMAIN—A JOURNEY THROUGH LIFE AND LEGEND

An ancient village, a volcanic cave and a burial site on a tabu island form the triangle of Chief Roi Mata's domain, a unique cultural landscape in Vanuatu whose features reflect the ongoing influence of traditions dating back at least 400 years.



Site of Roi Mata's grave, Artok
(Hat Island), Vanuatu
Photo: Vanuatu Cultural Centre

Around 1600 AD, the last chief to hold the title of Roi Mata brought peace to the war-ravaged island of Efate in Vanuatu. From his residence in the village of Mangaasi, he instituted a political system known locally as the *naflak*, which to this day defines genealogical affiliations and the way the community interacts with the landscape.

Mangaasi has a history stretching back nearly 3000 years. It includes evidence of the massive Kuwae volcanic eruption of 1452 AD, which was larger than the Santorini eruption that destroyed the Minoan culture of ancient Crete. The remains of the village include eight sacred stones where generations of holders of the title Roi Mata received people who came to pay their respects, as well as a large dancing area 300 m × 100 m wide, and gigantic trees that are said to date back to the time of the last Roi Mata.

The second part of the site is Feles Cave on Lelepa Island, where oral tradition

indicates that Roi Mata drew his last breath. The cave is a deep chamber in a volcanic tuff cliff and is still central to the traditions of the local people. The spirits of local people's ancestors are believed to walk in the cave, and if their footprints are found by grieving relatives a mark is made. These marks add to the ancient paintings and engravings, including some from Roi Mata's time, that adorn the walls.

Roi Mata's corpse was taken from Feles Cave and displayed in each of the villages of Efate owing him loyalty before being taken across the sea to Artok (or Hat) Island for burial. According to oral tradition, family and clan members accompanied Roi Mata in his journey to the land of the dead. These traditions have been verified through archaeological excavations, which have identified a mass grave of around 50 individuals, many of whom were richly adorned with insignia of their clan and rank. Roi Mata himself is buried with his advisors and possibly his youngest wife in the deepest pit at the site. Above and around them are the remaining individuals, including 11 couples, embracing in death. The graves appear to have been dug in an area which archaeologists believe to be the dancing-ground for the final burial ceremonies.

Through the achievements of his life and the rituals of his death, Roi Mata created an oral and social tradition that has also created a unique landscape over the centuries. Following his burial, human habitation on Artok Island ceased, allowing marine and animal life to flourish.

The chiefly title of Roi Mata has not been bestowed on any individual since the abandonment of Artok Island, as potential candidates have felt that the responsibilities it carries are too great. Today, the traditional owners of the sites wish to protect Roi Mata's legacy through the nomination of the sites for World Heritage status as a cultural landscape.

TAPA CLOTH

Tapa, or barkcloth, is one of the most distinctive products of Pacific Island culture. While some South American, African and Southeast Asian peoples also made barkcloth, the commonly used name 'tapa' originates from Polynesia. Tapa cloth is also thought to have reached its greatest refinement and variety among the islands of the South Pacific.

The skill and knowledge of making cloth from bark were brought from Southeast Asia by the first people to move into the South Pacific. Most linguistic and archaeological evidence suggests that tapa-making was one of the ancient skills that the Lapita ancestors of Polynesia brought with them when they migrated into the wider Pacific.

Within each culture, tapa serves a wide

range of purposes, from utilitarian to ceremonial. Clothing is the main use for many cultures, but the tapa cloth is often also kept for ritual purposes. This includes presenting it to honoured guests, wearing special tapa clothing for festivals and using it to wrap images of their gods. In Samoa, tapa, or siapo, plays a crucial role in exchange at special occasions, such as births, weddings, funerals or the investiture of matai (chiefly) titles.

The designs and techniques used when making tapa vary between the east and west Pacific, as well as between islands. When large cultures met and traded, such as the people from the Fiji-Samoa-Tonga triangle, the unique designs easily identified the source of the tapa. For example, Cook Island tapa cloths are distinctive for their striking contrast of black designs on a white background, whereas Tahitian tapa are recognisable for their leaf designs, which are created by dipping ferns into dye and using these to stain the cloth.

During the period of European colonisation in the Pacific, the use and production of tapa continued, with village women adapting their techniques and designs to suit the changing conditions. As well as introducing new tools and dyes, they incorporated foreign motifs into their work and sometimes created new types of clothing. Despite these adaptations to European influences, the basic craft of tapa-making persisted in the region.

Tapa designs are not only visually unique to different cultures but they can also tell stories and hold hidden messages. Many Tongan tapa motifs commemorate historic events and make references to chiefs or ancestral lines. In parts of Papua New Guinea, even when used in an everyday context such as for clothing, patterns on the tapa cloth can convey signals about clan allegiance.

The first Europeans to explore the Pacific came to regard tapa as a symbol of Pacific identity, a symbol that is still a fundamental feature of Pacific culture.

Tongan tapa cloth featuring
flowers and doves
Photo: Kevin Jones



NAN MADOL—SACRED ISLETS OF POHNPEI

Around 500 AD, two brothers, Olisihpa and Olosohpa, built an altar at Nan Madol to worship the god of agriculture, Nahnisohn Sahpw. These brothers began the Sau Deleur dynasty, which ruled Pohnpei for almost 1000 years and which was responsible for the construction of between 92 and 98 artificial stone islets that can still be seen at Nan Madol in the Federated States of Micronesia.

Sometimes called 'the Venice of the Pacific', this complex of artificial islands that are separated by canals is a cultural landscape demonstrating both the shared Polynesian tradition of stone megalith building, and the unique political and cultural character of ancient Pohnpei. The use and purpose of the site reflects the successful organisation by the Sau Deleur dynasty of a centralised political system to govern an entire island population.

The residential islets and tombs were constructed on a reef behind a wall of massive basalt boulders that form 12 islets

bordering the site. The site is 1.5 km × 0.5 km in size, and it is estimated that between 500 000 and 750 000 tonnes of building material was used to construct the complex over a 1000-year period. The islets themselves are semi-rectangular in shape. Their base is formed from huge boulders that are topped by basalt slabs and infilled with coral rubble. All of the islets were individually named and more than half have burial chambers.

The ideology of the new state was based on the Nanmwarki system of carefully ranked inherited leadership. It is likely that the islets functioned as a residence for the political, religious and social leaders of the society and their retainers. Estimates of the number of residents vary, but it may have been up to 1000 in total. They had to be supplied with food, water and other essentials from villages and cultivations on the main island.

Although time and nature have taken their toll on many of the structures, some are





Nan Douwas, one of the ceremonial islets of Nan Madol, Pohnpei, Federated States of Micronesia
Photos: Kevin Jones



still in excellent condition. Nan Douwas, one of the largest and best preserved of the islets, still retains the full-height stone facings of its original construction. It measures about 30 m², with walls up to 8 m high and 2-3 m thick. The internal layout of courtyards and burial chambers can still easily be appreciated. The building of the complex began as early as 500AD, and it was not abandoned as a ritual and social centre until the 16th century. The site was explored by Europeans in the 19th and early 20th centuries.

Nan Madol represents an exceptional and unique example of the link between architecture and political function. The creation of a centralised ritual and political centre mirrored the shift in socio-political organisation from a tribal society to a centralised political state. Some of this tradition continues in the chiefly systems of modern Pohnpeian society, continuing the practices that were started by two brothers over 1500 years ago.

RAPA NUI'S MAGNIFICENT MOAI

Rapa Nui is the indigenous name for Easter Island (Isla de Pascua). This Chilean island, the most isolated inhabited island in the world, lies in the eastern Pacific and is home to a unique cultural phenomenon—hundreds of giant stone monoliths known as moai (anthropomorphic statues). Created by a complex culture in a geographically isolated location, moai are recognised for their magnificent size and presence.

The story of the moai is intricately intertwined with the social structure

the territorial divisions of the island and dispersal of the small, highly competitive social entities that they represented. This great social and spiritual decay was probably caused by an environmental crisis: the people had over-exploited the island's resources, resulting in total deforestation and a scarcity of gardening land.

Conflict erupted between the competing clans and by the 18th century the moai had almost all been thrown down with their faces in the ground. It is thought



Birdman petroglyphs, Orongo Village, Rano Kau (left)

Moai on the outer slopes of Rano Rarakau (middle and right)

Photos: Kevin Jones

and ultimate downfall of the culture that created these great statues.

Rapa Nui was discovered and settled by Polynesians in around 800 AD. Small statues were beginning to be carved by around 1100 AD. In the 16th century, which was the height of moai production, the largest moai were created, symbolising the very essence of Rapa Nui culture.

The moai stand on rectangular platforms, ahu, and in courtyards. These were ceremonial places. The moai represented the spirit of the tribal ancestors and served to maintain the memory of individual clan histories. They played a key role in social organisation and the control of land division on the island.

At around 1200 AD, the island became increasingly divided into strips running from the coast inland, defining clan boundaries and controlling access to resources such as fresh water and land for gardens. Competition to build the biggest and best moai began to emerge between clans.

Near the height of the moai production period, there was a breakdown of social order on Rapa Nui marked by a failure of

that clans saw the destruction of their rivals' moai as a destruction of their mana. The damage inflicted upon the great statues symbolised the affliction that one clan wanted to inflict on another.

Following the throwing down of the moai, the Rapa Nui people replaced the ancestors' cult of the moai with another, the birdman cult (Tangata manu). The ceremonial village of Orongo, which is situated on the cliffs above the crater lake of Rano Kau, is a great archaeological site that is testimony to this cult.

Today, the great moai are some of the most widely recognised symbols of the Pacific. Their sheer size and the mystery that surrounds them have enthralled people for years. Efforts are being made to conserve the moai and many have now been re-erected.

The Polynesian culture of Rapa Nui is alive today, despite its dramatic history almost bringing its people to extinction. In 1995, Rapa Nui National Park was inscribed on the World Heritage list and visitors come from all over the world to appreciate the island's magnificent iconic moai.



Fallen moai, Ahu Vaimata

Ahu Kivi, moai re-erected on ahu









Levuka Beach Street
Photo: Anita Smith

LEVUKA—A COLONIAL PACIFIC PORT

Levuka, Fiji's first capital, is one of the best-preserved colonial port towns in the world. Located on the rugged island of Ovalau off the east coast of the main island of Viti Levu, the site of present-day Levuka was probably first settled by the makers of Lapita pottery around 2500 years ago. It is thought that they would have been attracted to the site by the same geographical features that brought European traders to the area in the 1830s—a sheltered harbour that was accessible through a nearby gap in the reef.

Around the Pacific and the rest of the world, many colonial port towns developed into major cities and in the process lost their original character. In contrast, Levuka has kept much of its unique cultural heritage because of a series of political and economic changes that saw the colonial capital of Fiji move

from here to Suva in the early 1880s.

In the early 19th century, the indigenous village of Levuka existed on the site, and the Tui Levuka was the village chief. The Tui Levuka permitted European 'beachcombers' to settle in the village and establish small trade businesses. European influence in Levuka grew from the 1830s to the 1860s with the development of trade and cash crops, and the arrival of Marist missionaries in 1858. The town boomed, with bars and shops lining the beach and private houses being built on the steep hillsides.

However, the growing population led to crime and tension within the community, and in 1871 a local chief, Ratu Seru Cakobau, attempted to control the situation by forming a modern government along Western lines. The attempt to establish an indigenous government failed, and on 10 October

1874 Cakobau and fellow chiefs ceded control of Fiji to the British at the village of Nasova, just outside Levuka, which led to the establishment of the colony of Fiji.

The events leading up to the establishment of Fiji echo similar events in other parts of the Pacific. For example, in New Zealand, crime, drunkenness and prostitution at the first large European settlement of Kororareka earned it the name of the 'hell hole of the Pacific'. When Governor William Hobson established New Zealand's first capital in 1840, he was unwilling to site it at Kororareka, and so purchased land at Russell across the Bay of Islands.

From 1874 to 1881, Levuka was Fiji's colonial capital. The town, which was established alongside the original Levuka village, then developed further, with the construction of many colonial buildings for the British administration. These included Fiji's first public school, bank and post office. By the turn of the century, a hospital, town hall and the oldest Masonic Lodge in the Pacific had been

constructed in the town. The Royal Hotel, which is believed to be the oldest hotel in the Pacific, was established in Levuka in the late 1880s, and continues to be run by the descendants of the original owners.

Many of Levuka's early public buildings still exist, as do commercial buildings, especially those associated with the copra industry, and private dwellings from the colonial period. Links between the culture and geography of the site also exist in the architecture of the town. The spire of Sacred Heart Church, built by the Marist Fathers, was lined up with a beacon lit at night on the hills behind the town to help guide ships through the gap in the reef that was first used by Lapita settlers.

As a potential World Heritage site, Levuka combines a long, rich and occasionally tempestuous history with architecture and physical features that reflect the global signature of European, particularly British, colonisation in the 19th century, as well as the early contact between European and Fijian people.

Levuka School
Photo: Anita Smith



HAWAI‘I—PEOPLE OF THE LAND

As is the case for many Pacific peoples, the native Hawaiian perspective of wilderness differs from the traditional Western perception. Land has never been something they could own; it is considered sacred and belongs to the gods.

Native Hawaiians relate to the land through vertical and horizontal divisions. Vertical divisions are based upon geographical landforms—mountains, rivers, streams and cinder cones. These create ‘political’ boundaries separating chiefdoms and are known as ahupua‘a. Horizontal land divisions are based upon vegetation, and relate to the way in which the native Hawaiian people identify and

connect with the land. Each division, starting from the top of a mountain down to the ocean’s edge, relates to a unique relationship between the people and the land.

Kuahiwi refers to the mountaintop. Because of its height, kuahiwi is very sacred. Kualono is the area near the mountaintop where very little vegetation grows, and wao ma‘ukele is a region of wet, soggy ground surrounding the mountain.

Wao akua is the forested area below the wao ma‘ukele, and is said to be occupied by spirits of the forest. Humans seldom ventured into this area during ancestral times. In wao akua, the forest has a great variety of trees. The trees in this area need to be healthy and in abundance to keep the forest alive through the supply of seeds and the regeneration of new growth. Wao kanaka refers to the outer forested region, where humans could gather vegetation and collect wood. Kula is the upland grassy plains, and kahakai refers to the edge of the ocean.

Native Hawaiians recognise and acknowledge the importance of vegetation, identifying land sections by the change in flora. They place high cultural value on older or larger trees because they know that the trees bring the rain and that water is essential for life. The word ‘ohi, which is the beginning of the word ‘ohi‘a (a large red-flowering tree), means ‘to gather’, which is what this tree does—it gathers rain.

From a native Hawaiian perspective, the ‘ohi‘a tree is the most important tree in the forest. In ancestral times, if a large ‘ohi‘a tree had to be taken from the wao akua, a human life would have to be sacrificed. If possible, native Hawaiians would try to source the trees elsewhere, avoiding the disturbance of seed-producing forest areas.

The continual Aloha ‘Aina (love of the land) and respect for their homeland by the native Hawaiian people is highlighted in the way in which Hawai‘i Volcanoes

‘Ohi‘a trees inundated by lava flow from Kilauea, one of the world’s most active volcanoes
Photo: USGS Hawaiian Volcano Observatory





'Ohi'a trees frame view of summit of Kilauea Volcano, its craters and caldera
Photo: Hawai'i Volcanoes National Park

National Park, a World Heritage site, is managed. Many of the park's staff are Hawai'i born and raised. Their work focuses on the preservation of the cultural and historical importance of the area, and the protection of the living indigenous culture.

The park recognises the vital connections that the island's first people have to sacred sites and provides a sanctuary for reclaiming ancient feelings of place. It is here that native Hawaiians come to offer homage to their akua and 'aumakua, gods and guardian spirits.

At certain times throughout the year, the echo of pu (sea shell trumpet) and the heartfelt expression of chant and dance on the edge of the Halema'uma'u Crater serve as a reminder that the culture of Hawai'i is very much alive.

'The thread of ancestral memory reminds us that the mountain, like our parents, is the wellspring and provider of physical and spiritual nourishment.' Pualani Kanaka'ole Kanahale



Lehua blossom on the sacred 'ohi'a tree
Photo: Hawai'i Volcanoes National Park

FAGALOA BAY—UAFATO/TIAVEA CONSERVATION ZONE

Living in the Pacific's largest remaining area of coastal rainforest, the people of Uafato and Tiavea manage the 1400-ha community conservation zone in a traditional way, with the long-term future in mind and a 3000-year history behind them.

Uafato is a very important area in the history of Samoa. It is one of two known sites in Samoa that were settled by the Lapita people, perhaps 3000 years ago. Local clay that is suitable for the manufacture of pottery is found in the area, possibly explaining why the island's earliest settlers chose this remote spot for a settlement. The name Samoa is also said to have originated from Uafato village, and the remains of old fortresses and villages can be found in the conservation zone.

Uafato is located in one of the remotest areas of Samoa and the local community depends almost solely on natural resources

for their livelihood. In 1994, village elders, who were concerned about over-exploitation of the forest, approached the non-government environmental organisation O le Siosiomaga for assistance in managing their resources. O le Siosiomaga formed a partnership with the UN agency SPREP (Secretariat of the Pacific Regional Environment Programme) and the villagers to develop a conservation programme for the area. The forest is one of the most important areas of natural biodiversity in Samoa and the Pacific. It has an intact band of rainforest running from the sea to the interior upland.

Among other features, it has the largest remaining stand of ifilele (*Afzelia bijuga*), a tree of great significance to Samoan people, and in the forest are a number of endangered animals, including two bat species, six of the eight endemic Samoan birds and the extremely rare manumea

Fagaloa Bay

Photo: Yoshichika Akasaki





Uafato Conservation Area
Photo: Tata Lawton

(tooth-billed pigeon, *Didunculus strigirostris*).

The area is also extremely important to Samoan mythology. It is the home of the ancestral god Tagaloa, who lived in the ninth heaven—the highest mountain in the area, standing at a height of 700 m to the west of the village of Uafato. Another ancestral god, Moso, is also said to have lived in the area, and some of the stone features that are visible are associated with his life, such as a chair (nofoa), a dining table (laulau ai) and a bowl buried in the sand (tanoa faiava).

The relationship between the local villagers and the forest is central to the future of the area. The forest provides resources such as wood, which villagers use for carving, and pandanus, which is used to make baskets. These provide income for the village, enabling the people to meet their cultural and religious

obligations, and thereby maintain the reputation and status of the community. Due to their isolation, the villages maintain almost unchanged traditional social and community practices.

To protect the forest and their livelihood, the villagers have worked with O le Siosiomaga and SPREP to develop a range of conservation practices. There are now restrictions in place limiting access to the forest and the sea, and bans on the use of chemical pesticides, dynamite and fish poisons. Local pigs have been fenced in and carvers have been trained to use wood resources more sustainably. A marine protected area has been established, including a restricted no-take area.

These new practices will protect the legacy of the past and the future of this beautiful, rugged and historic part of the Pacific.

LIVING THEIR ANCESTORS' LIVES



Traditional fales are still commonly found throughout Manono and Apolima Islands
Photo: Paul Dingwall

There are very few places on earth where traditional lifestyles continue more or less unchanged to this day. The Samoan islands of Manono and Apolima are two such places and are candidates for nomination as cultural landscapes.

These islands are remarkable not because of their natural biodiversity, but because of the way in which the people have interacted with the landscape over a period of hundreds, if not thousands, of years, creating a sustainable natural and cultural environment. Although the process of first modifying the landscape and then adapting crops and animals has been underway in the Pacific for thousands of years, Manono and Apolima Islands are special because of the way in which the people have maintained their modified and adapted environments into the modern era.

Central to this lifestyle are the traditional cultural practices known as fa'a-Samoa or 'the Samoan way'. The practices of fa'a-Samoa encompass both personal and communal behaviours and the relationship of people with the landscape through the physical layout of villages and fields.

At the core of fa'a-Samoa are a set of family relationships that govern behaviours and

nurture respect for people in positions of authority, particularly the familial leader or chief (matai) and religious leaders. The matai is often responsible for managing areas of communal land or resources. Certain people may be responsible for tending certain crops or animals, or for fishing, and may live in close proximity to those resources, whereas the matai may live in the centre of the village.

On Manono and Apolima Islands, fa'a-Samoa is still the guiding way of life. Gardening, fishing and caring for livestock are still the basic activities of the inhabitants. Although a limited amount of tourism has also been allowed in recent years, this is under strict control to ensure that the values of the community are not transgressed.

Some new tools have been used for gardening and fishing. However, many traditional practices and tools remain in use, such as the building of outrigger canoes using hand tools. There are no roads or cars, and very few other modern conveniences.

The islands have been important in the history of Samoa. Lying between the two larger islands of Upolu and Savaii, Manono and Apolima Islands have wielded significant political and military influence through their control of the sea and strategic alliances.

From 1820 to 1870, Manono Island was the effective capital of the country and was where the London Missionary Society established its headquarters when it arrived in 1836.

Today, the islands are populated by fewer than 1000 people, most of whom live in four villages on Manono Island. The smaller island of Apolima is the remnant of a volcanic crater (Apolima literally means 'hollow of the hand') and is extremely difficult to access, as the only landing point is through a narrow, winding channel which is washed by sea currents and waves. A small islet between the two islands, Nuulopa, is a conservation area for flying foxes and turtles.

HUVALU FOREST

Saving native bats (peka) and pigeons (lupe) from starvation following the devastation of their habitat by Cyclone Heta in Huvalu Forest was a way for Misatama Kulatea to carry on the traditions of his forefathers of Hakupu Atua village in Niue.

Following the cyclone, Misatama found hungry bats and pigeons that had lived in the devastated forest searching for food. Using his greenhouse as an aviary, he started feeding the animals using pawpaw and tins of peaches and pears from the supermarket.

Huvalu Forest, which is situated near Hakupu Atua, is the largest remaining area of rainforest in Niue. It is a living cultural landscape and an example of how local communities across the Pacific have developed cultural practices to protect their natural resources.

The forest continues to exist as a result of the traditions of the village of Hakupu Atua, whose forefathers declared part

of the forest tapu (taboo) before the Second World War. At the heart of Huvalu Forest is an area called the Tauga, where the sacred blessing of village elders has protected animals such as bats, pigeons and land crabs from hunting.

Concepts of tapu and taoga (treasures) are part of the shared cultural heritage of the Pacific. As people journeyed across the Pacific, they settled islands with widely differing resources and landscapes. They managed these resources using cultural tools such as tapu and rahui (reserves), and by adapting their environments through the introduction of plants, animals and tools that they brought with them. In this way, the gardening skills that were developed in Papua New Guinea and the pottery of the Lapita people moved across the Pacific, being changed and adapted as they went.

The Tauga has recovered from Cyclone Heta, and Misatama Kulatea has released the bats and pigeons he was feeding back into the forest, continuing the traditions of protecting the forest and the life in it for future generations.

Niue ratified the World Heritage Convention in 2001, and the Community Affairs Department and Taoga Niue Office are preparing a tentative list that includes Huvalu Forest and the Tauga area. With a population of only 1700 people, the preparation of a tentative list is a substantial undertaking for Niue, and technical assistance from UNESCO's Apia Office may be needed.

Kulukulu
Photo: G. McCormack



NEW CALEDONIA'S SEA OF TREASURES

The world's second largest coral reef, surrounding one of the world's largest lagoons, is on France's tentative list for World Heritage nomination. New Caledonia, in the South Pacific, is one of the world's biodiversity hot spots and is home to an outstanding reef system that surrounds the islands. What makes the area remarkable is that over three-quarters of the plants and animals found on the islands of Grand Terre, Ile des Pins and Loyalty Islands, and in the lagoon and surrounding barrier reef, are unique to the area.

The size of the reef system itself is incredible. The reef is more than 4000 km long and encloses more than 24 000 km² of lagoon. The strong local and national willingness to preserve this beautiful and largely unspoiled environment has driven the authorities to submit a tentative list submission for an area that includes 1600 km of barrier reef covering 7284 km², and which encloses more than 1.5 million ha of lagoon.

The submission is for a proposed serial site highlighting six sites that make up the reef. These sites cover a wide range of

marine and adjacent ecosystems, which are representative of the biotopes at the level of the archipelago. Some of the outer reefs are as much as 80 km offshore and are exposed to strong oceanic currents. Other reefs lie within a few kilometres of the mainland, and are influenced by factors such as human settlements and primary sector activities.

Despite the existence of traditional and small-scale fisheries, the reefs are in excellent condition. The diversity of marine life is very high, with over 1700 fish species documented, 600 species of sponges, 5500 species of molluscs, 5000 species of crustaceans and over 350 species of algae. Notable among the inhabitants of the reef are dugongs (*Dugong dugon*), green turtles (*Chelonia mydas*), giant clams (*Tridacna* spp.) and humpback whales (*Megaptera novaeangliae*). One reason for this diversity is the latitudinal situation of these sites. This results in a mixture of warmer and colder waters along the reef: in the south and east of the reef, cooler waters from New Zealand bring a variety of temperate species to the area, while in

Humpback whales are a common inhabitant of the surrounding reef system
Photo: C. Garrique





Bourail Pass
Photo: M. Dosdane

the north and west of the region warmer waters from Papua New Guinea create tropical conditions.

Development of the tentative listing involved a great deal of consultation with local communities, including traditional users of the reef. Issues that needed to be considered included the use of the reef for customary fishing, the maintenance of taboos on particular areas, and the provision of opportunities for the maintenance of cultural activities, such as the sacrifice of a turtle by the Djubea

Kapone Customary District during an annual ritual to celebrate the yam.

In all six Customary Districts, groups have been involved in discussions about the management of the proposed site, with more than 50 community meetings to date. A pleasing side-effect of this process has been that the different parties involved, from state and regional government to traditional stakeholders, have developed increasing confidence in each other over the management of the proposed site.

Green turtle
Photo: C. Grondin





East Rennell
Photo: Paul Dingwall

EAST RENNELL

East Rennell, in the Solomon Islands, is an outstanding example of ongoing ecological and biological processes. It was inscribed as a World Heritage site in 1998. An important feature of the site is the fact that in the last year the local community has developed a management plan that engages local traditional landowners in the future protection and running of the area.

Rennell is the largest raised coral atoll in the world and contains Lake Tegano, a brackish freshwater lake, 15 500 ha in size, which developed from a former lagoon. Covered with dense forest that is largely unmodified, the impacts of humans, invasive predators and weeds on the native biodiversity have been relatively small.

There are four main villages within the area of the World Heritage site, with a total population of around 700. This is the westernmost Polynesian community in the South Pacific. The people possibly came from the Wallis and Fortuna group in around 1400 AD. Land is owned communally, with the lake being regarded

as common property of all the villages. Traditional landowners have a high degree of autonomy in the Solomon Islands. Therefore, it is vital that local communities become engaged in management. Fortunately, the communities of East Rennell take pride in the listing of their home as a World Heritage site, and believe that sustainable management of the area is a key to their long-term prosperity.

In the late 1990s, following the inscription of the site, some work was undertaken to develop conservation and management plans. Civil unrest in the Solomons brought this process to a halt until 2005, when a UNESCO team visited East Rennell to evaluate the situation. As a result of this visit, a new process was started in 2006 through a partnership between the East Rennell World Heritage Trust Board, the local Council of Chiefs, community leaders and landowners. A series of participatory workshops was held to discuss and debate options for managing the area, and from this process an action plan and a tourism development plan were prepared. These



East Rennell rainforest
Photo: Paul Dingwall

plans are now the guiding documents for the community and for any potential partners or donor agencies that wish to become involved.

The major threats to the site identified by the community are pressure to log the forest and the potential to over-harvest coconut crabs (*Birgus latro*) and some species of fish from the lagoon. Cultural pressures are also a problem. The development of a cash economy and the demand for modern conveniences are forcing residents to find sources of income, which in turn increases pressure on local resources. The potential for tourism, based around the World Heritage site, is an important opportunity for local communities to generate income in less intensive ways.

The objectives of the plan include sustainable management of the forest and marine resources to ensure food security for the local communities while protecting the health of the ecosystems. The plan also focuses on involving and training local community groups in the monitoring and protection of the site. Local communities have a great deal of traditional knowledge about the area and its resources. This is a very important link to the ongoing management process. The plan mirrors some of the approaches taken by the traditional owners of Kakadu National Park in Australia, where management of the site is strongly influenced by ancient rituals and management practices.

Rennell ibis, East Rennell
 World Heritage Area, Solomon
 Islands (left)

Tropical vegetation around Lake
 Tengano, East Rennell
 World Heritage Area, Solomon
 Islands (middle)

Raised coral, Lake Tengano,
 East Rennell World Heritage Area,
 Solomon Islands (right)

Photos: Les Molloy



KAKADU NATIONAL PARK—INDIGENOUS MANAGEMENT

There are parts of Kakadu National Park, a World Heritage site, that no tourist will ever see. This management decision reflects the wishes and knowledge of traditional owners of Kakadu, who play a central role in planning the future of the park.

The park crosses the boundaries of 15 Aboriginal clans. The clans have leased the park to the Australian Federal

Government, but continue to actively participate in the park's management through the 15-member Board of Management. Recently, a new park plan and vision for tourism was developed with the aim of integrating indigenous values into the management of the site. The traditional owners, who make up 10 of the 15 members of the Board, consulted thoroughly with their clans before agreeing to the plan.

Reconciling the increasing demands of tourism with the values of the traditional owners who live in the park has been one of the biggest challenges for the Board of Management. As Ryan Baruwei (Wurrkbarrbarr clan) describes it, 'Tourism was becoming "boss of country", driving the way the park was managed and threatening clan life and culture.'

Traditional owners and their clans actually live within the park, and continue to use it for hunting and cultural purposes as they have done for thousands of years. To manage the pressures of tourism on traditional life and values, the Board has decided that some parts of the park containing sacred sites and burial grounds will be permanently closed to tourism, and other areas where traditional management practices take place will only be open at certain times of the year.

Park ranger and traditional owner Jeffrey Lee (Djok clan) explains that at certain times of the year his clan undertakes controlled burning of the bush both as a way of managing fire risk, and as a hunting and fishing tool. Controlled burning has shaped the ecology of Kakadu over thousands of years, and closing areas to tourism at burning times will help to continue that tradition.

Integration of the values of indigenous people in the management of their sites is an important issue across the Pacific. In early 2007, a management plan was approved for the East Rennell site, based on the cultural and economic needs of the indigenous people who, like the people





Kakadu National Park
*Photos: John Baker, Australian
Government Department of
the Environment and Water
Resources*

of Kakadu, rely on the local environment for much of their livelihood. Many of the sites currently on tentative lists, such as Manono and Apolima Islands, Samoa, will face similar management challenges to those of Kakadu and East Rennell.

Although it is not easy to reconcile the indigenous values of traditional owners with Western management structures, doing so is a rewarding and essential task for the future of World Heritage in the Pacific.



FOR THE GOOD OF MANKIND

Pacific people have overcome many challenges in their long history, but few have experienced a challenge as great as that of the Marshall Islanders of Bikini Atoll, whose home was the site of 23 American atomic bomb tests between 1946 and 1958.

Evacuated from their homes in 1946 'for the good of mankind and to end all wars'¹, the people of Bikini cannot now return to their home because of the legacy of radiation. Their cultural

heritage therefore reflects the impact of Western technology and culture on the environment and landscape of this Pacific lagoon.

As a potential World Heritage site, Bikini would include unique historical and cultural landscape values. The historical values reflect an important period at the end of the Second World War when the atomic age was beginning and the technological race started to develop more powerful nuclear weapons. Cultural values include the naming of the women's two-piece swimsuit that was coming into fashion at the time of the tests.

Within the lagoon there are a number of important historical sites, including 16 ships that were deliberately sunk during one of the first tests in 1946. These vessels include several that have important historical significance, among them the aircraft carrier USS *Saratoga* and the flagship of the Japanese Fleet, *Nagato*, which was the scene of operational planning for the attack on Pearl Harbour.

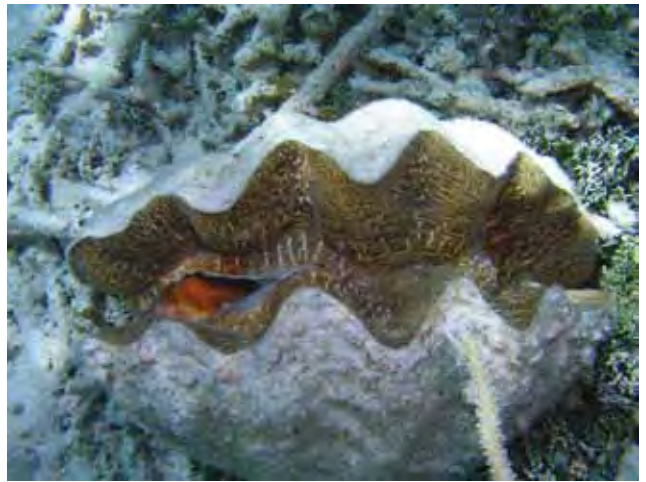
As a natural site, Bikini is a unique example of a marine environment that has recovered from devastating damage. The lagoon and surrounding reefs have been largely undisturbed since the nuclear tests ended in 1958, and now show rich biological diversity.

The Marshall Islands are also considering a serial listing of a chain of seven northern atolls that are now largely uninhabited and represent an outstanding example of marine and atoll habitats. In the past, they were an important traditional harvesting area for inhabitants of nearby atolls who journeyed 50–100 km to use the marine and seabird resources as a 'pantry' to supplement the limited food resources on their home islands.

Three divers hover on the upside-down hull of the battleship
Arkansas
Photo: Eric Hanauer, www.ehanauer.com



¹ From a speech made by Admiral William H. Blandy to the people of Bikini when they were requested to leave Bikini in 1946.



Ailinginae Atoll, Marshall Islands *Photos: J.E. Maragos*



NEW ZEALAND'S WORLD HERITAGE SITES

New Zealand separated from the ancient supercontinent Gondwana 80 million years ago. Since this time, the country has evolved into a spectacular collection of dominating mountain ranges, rolling plains, volcanic landscapes, rugged coastlines, breathtaking glaciers and amazing offshore islands.

New Zealand's three World Heritage sites, Tongariro National Park in the central North Island, Te Wahipounamu - *South West New Zealand* and the subantarctic islands in the Southern Ocean, encapsulate unique ecosystems and the beauty of the land.

The sacred mountain peaks of Tongariro National Park—Ruapehu (2797 m), Ngauruhoe (2290 m) and Tongariro (1968 m)—are dominant features on the

Yellow-Eyed Penguin,
Auckland Islands
Photo: Sam O'Leary



landscape of the central North Island. These mountains are at the heart of the World Heritage site and have important cultural significance for the Maori people, symbolising the spiritual links between the community and its environment.

Tongariro National Park is also home to active and extinct volcanoes and a diverse range of ecosystems. It was the first site to be inscribed on the World Heritage list as a cultural landscape, recognising the park's important Maori cultural and spiritual associations, as well as its volcanic features.

Making up one-tenth of New Zealand's land mass, Te Wahipounamu - *South West New Zealand* extends 450 km down the west coast of the South Island, covering 2.5 million ha. It combines four national parks—Fiordland in the southwestern corner, Aoraki/Mount Cook to the north, Mount Aspiring in the centre and Westland *Tai Poutini* stretching along the West Coast.

Te Wahipounamu - *South West New Zealand* contains some of the best examples of animals and plants that were once found on Gondwana. It has been shaped by successive glaciations into a collection of fiords, rocky coastlines, towering mountains, ancient beech forests, lakes and waterfalls.

New Zealand's subantarctic islands—the Snares, Bounty, Antipodes, Auckland and Campbell Islands—are some of the least modified environments in the world. Isolated from each other, these islands are each unique in character, sustaining rare ecosystems.

The subantarctic islands are home to an extraordinary wealth of biodiversity and a large number of rare wildlife populations, including one of the world's rarest ducks, the flightless Campbell Island teal (*Anas nesiotis*), and the endangered New Zealand or Hooker sea lion (*Phocarctos hookeri*). Ten of the world's 24 species of albatross breed on these islands and the most southerly forests in the western Pacific are found here.



Doubtful Sound *Photo: Don Merton*



Aerial view of Mount Ruapehu and Ngauruhoe, Tongariro National Park *Photo: DOC*

COUNTRY PROFILES

Pacific Ocean

- The largest of the world's five oceans
- 155.557 million km²
- Covers about 28% of the global surface
- Larger than the total land area of the world
- Last region settled by humankind

American Samoa

Land area: 199 km²
Population: 57 794
Political status: Territory of the United States

Australia

Land area: 7 686 850 km²
Population: 20 264 082
Political status: Independent since 1901 (after being a federation of the British colonies since the 1700s)

Cook Islands

Land area: 236 km²
Population: 21 388
Political status: Self-governing; in free association with New Zealand

Commonwealth of the Northern Mariana Islands

Land area: 477 km²
Population: 82 459
Political status: Commonwealth in political union with the United States

Easter Island

Land area: 117 km²
Population: 4 200
Political status: Island of Chile

Federated States of Micronesia

Land area: 702 km²
Population: 108 004
Political status: Independent since 1986, under a Compact of Free Association with the United States

Fiji

Land area: 18 270 km²
Population: 905 949
Political status: Independent since 1970 from the United Kingdom

French Polynesia

Land area: 3 660 km²
Population: 274 578
Political status: Overseas lands of France

Galapagos Islands

Land area: 7 800 km²
Population: 30 000
Political Status: Islands of Equador

Guam

Land area: 541 km²
Population: 171 019
Political status: Territory of the United States

Hawaii

Land area: 16 729 km²
Population: 1 270 000
Political status: State of the United States

Marshall Islands

Land area: 181.3 km²
Population: 60 422
Political status: Independent since 1986 under a Compact of Free Association with the United States

Nauru

Land area: 21 km²
Population: 13 287
Political status: Independent since 1968 from the Australia, New Zealand and United Kingdom administered UN trusteeship

New Caledonia

Land area: 18 575 km²
Population: 230 789
Political status: French overseas territory

New Zealand

Land area: 268 021 km²
Population: 4 076 140
Political status: Independent since 1907 from the United Kingdom

Niue

Land area: 260 km²
Population: 1 700
Political status: Self-governing; in free association with New Zealand. Niue is fully responsible for internal affairs; New Zealand retains responsibility for external affairs and defence. However, these responsibilities confer no rights of control and are only exercised at the request of the Government of Niue.

Norfolk Island

Land area: 35 km²
Population: 1828
Political status: Territory of Australia

Palau

Land area: 458 km²
Population: 20 579
Political status: Independent since 1994 from UN trusteeship in free association with the United States

Papua New Guinea

Land area: 452 860 km²
Population: 5 670 544
Political status: Independent since 1975 from Australia

Pitcairn Islands

Land area: 47 km²
Population: 45
Political status: Territory of the United Kingdom

Republic of Kiribati

Land area: 811 km²
Population: 105 432
Political status: Independent since 1979 from the United Kingdom; formerly the Gilbert Islands

Samoa

Land area: 2934 km²
Population: 176 908
Political status: Independent since 1962 from New Zealand

Solomon Islands

Land area: 27 540 km²
Population: 552 458
Political status: Independent since 1978 from the United Kingdom

Tonga

Land area: 718 km²
Population: 114 689
Political status: Independent since 1970 from British protectorate; only monarchy in the Pacific

Tokelau

Land area: 10 km²
Population: 1 392
Political status: Territory of New Zealand

Tuvalu

Land area: 26 km²
Population: 11 810
Political status: Independent since 1978 from the United Kingdom

Vanuatu

Land area: 12 200 km²
Population: 208 869
Political status: Independent since 1980 from France and the United Kingdom

Acknowledgments

Fapoi Akesi
Nicole Baker
Laura Berdejo
Rachel Cates
Paul Chatterton
John Daniels
Chris Edkins
Scott Fitzpatrick
Vagi Genorupa
Marian Hutchin
Douglas Kalotiti
Tata Lawton
Tim Mackrell
Christophe Oblede
Ralph Powlesland
Mere Ratu
Faustina Rehuher-Marugg
Kayt Robinson
Susana Simonetti de Groot
KC Stover
Amanda Todd
Hon. Albert Tu'ivanuavou Vaea
Aseri Yalangono

Keola Awong
Ryan Baruwei
Becky Bliss
Anne Chamberlain
Andrew Cutler
Paul Dingwall
Tony Everitt
Mose Fulu
Eric Hanauer
Kevin Jones
Mardie Lane
Jeffery Lee
Rufino Maurico
Isabelle Ohlen
Pronto Print
Ralph Regenvanu
Peter Retimanu
Peter Sheppard
Dr. Anita Smith
Greg Tai'eha
Richard Ariihau Tuehiava
Carla Wilson
Dr. Robert Yarrow

