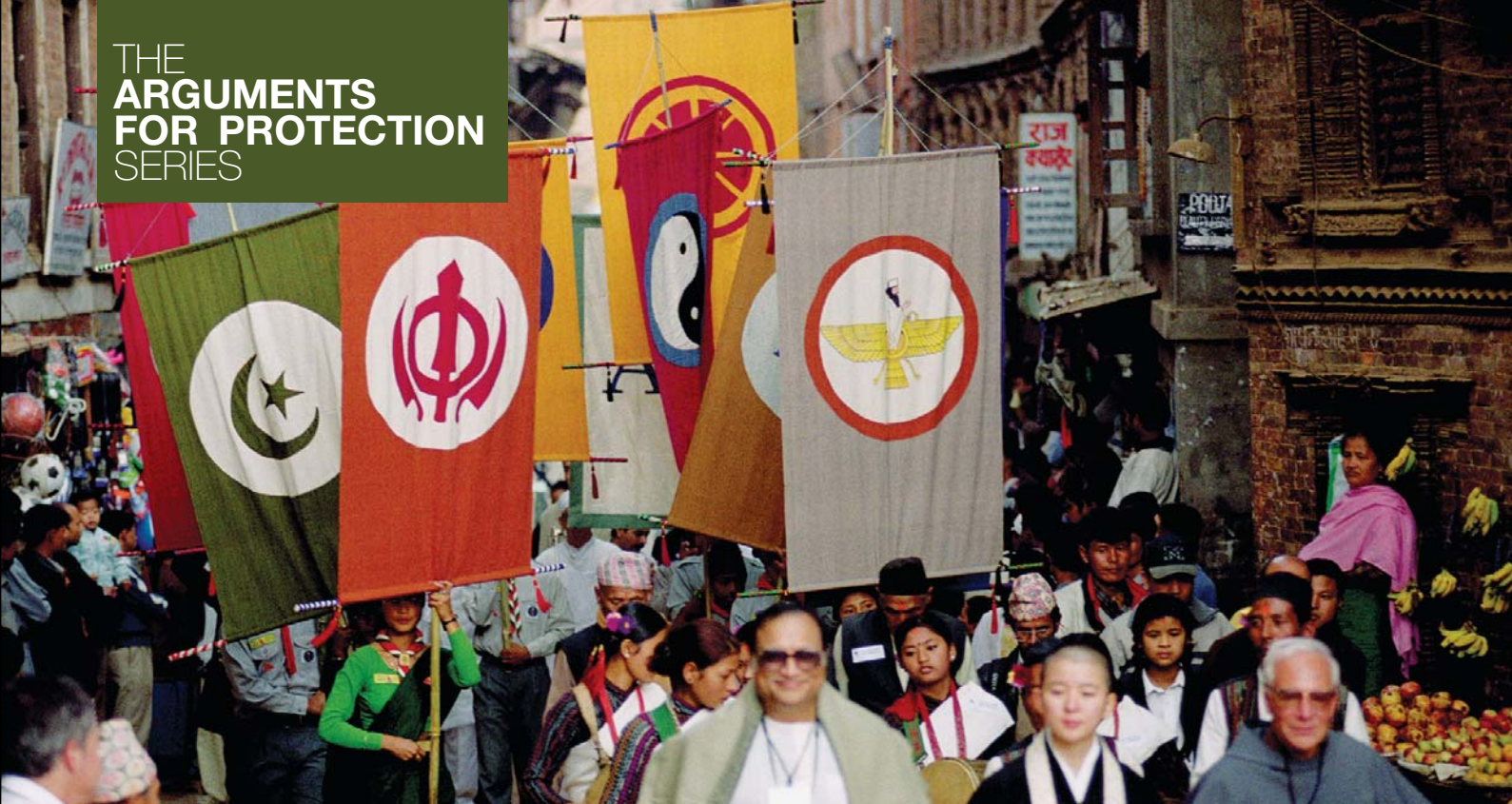


THE
ARGUMENTS
FOR PROTECTION
SERIES



Beyond **Belief**

Linking faiths and protected
areas to support biodiversity
conservation



A research report by WWF, Equilibrium and Alliance of Religions and Conservation (ARC)

Arguments for Protection

Beyond Belief: Linking faiths and protected areas to support biodiversity conservation

A research report by WWF, Equilibrium and the Alliance of Religions and Conservation (ARC).

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Preface

In the far north of Malawi, Nyika National Park extends over 3000 square kilometres and contains the largest “mountain island” in sub-Saharan Africa – a high plateau rising to more than 2,600 metres, which is home to an extremely rich wildlife population including several species found nowhere else on Earth. When the Malawian government extended the park in 1978, it swallowed several sites that remain sacred to local people, including a mountain, lake and waterfall that are all used as places to pray for rain during times of drought. At first, the rules of the park excluded local people from having access to these sites. But Chief Chikulamayembe protested on behalf of his people and regulations were relaxed so that they can now use the sites whenever they need; the latest rain-making ceremony took place in 2004. The needs of this faith community have proved to be in no way incompatible with the protection of a unique ecosystem.

Today, the world is losing plant and animal species faster than at any other time in history, largely because of our human actions. The United Nation’s Convention on Biological Diversity (CBD) is addressing this crisis by encouraging countries to establish and enhance the effective management of protected areas to provide safe havens for wild nature through an ambitious *Programme of Work on Protected Areas*. Learning to coexist with the rest of nature presents us with a huge challenge, requiring not only technical solutions but more importantly a profound shift in our own attitudes and philosophy.

The links between the natural and the spiritual provides a direct means of addressing this change. The CBD has recognised this, amongst other things through its work developing the *Akwe Kon* guidelines for assessing developments on sacred sites. The World Commission on Protected Areas is also deeply aware of this relationship and has a special Task Force on Cultural and Spiritual Values in Protected Areas, which is drawing up guidelines for sensitive management of such sites. And the faiths themselves have responded through a series of key statements and actions in support of sound environmental management. Governments are also recognising the importance of these issues and for instance Canada’s National Parks Act provides for access for spiritual or ceremonial purposes to aboriginal peoples.

This publication is, we think, the first to focus specifically on the links between faiths and the world’s growing protected areas network. We support its call for faiths and conservationists to work together to help achieve the world’s vision of halting biodiversity loss. In turn, as representatives of conservation organisations, we pledge to work with faiths in ensuring that when protected areas overlap with sites of spiritual importance, both these values will be taken into account in management. We hope and believe that both faith groups and conservation organisations can benefit from working in partnership to recognise and to protect the natural world, which provides such inspiration to so many.

Nik Lopoukhine: chair of the World Commission on Protected Areas

A handwritten signature in dark ink, consisting of a large, stylized 'N' followed by a series of loops and a long horizontal stroke extending to the right.

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This book has been prepared by WWF working in close collaboration with The Alliance of Religions and Conservation (ARC).

The authors and editors are responsible for the content of this report. Their opinions do not necessarily represent the views of WWF and ARC.

Summary

Most people in the world follow some kind of spiritual faith, and faiths have enormous impacts on the way that we think and behave, including how we relate to the natural world. Here we look at how faiths interact with one of the main tools of conservation – protected areas. These links come in two major forms:

- **Sacred places** – both sacred natural sites and built environments existing in natural or semi-natural areas. These can contribute very directly to global conservation efforts because they are often themselves well-conserved, through traditions that sometimes stretch back for thousands of years;
- **Influence of faiths** – through their philosophy, actions and influence, faiths can have a major impact on the way their followers view the protection of nature.

Links between faiths and conservation of land and water exist throughout the world and involve every faith system that we have examined. Faiths have been involved in some of the earliest forms of habitat protection in existence, both through the preservation of particular places as sacred natural sites and through religious-based control systems such as the *himas* system in Islam. **Sacred areas are probably the oldest form of habitat protection on the planet** and still form a large and mainly unrecognised network of sanctuaries around the world. A proportion of these sites (probably a large proportion) are also highly successful at conserving natural ecology and biodiversity.

The nature of these interactions is discussed in some detail. We include a survey of a hundred protected areas around the world which also contain important values to one or more faiths and also describe some sacred sites outside protected areas that have high conservation values. These issues are discussed in greater detail in 14 case studies from Kenya, Tanzania, Egypt, Lebanon, India, Sri Lanka, Indonesia, China, Mongolia, Europe, Finland, Australia and Colombia.

Unfortunately, many sacred natural areas and faith-based land management systems are currently under threat, because of cultural breakdown, pressures on land and resources and poor governance that together permit deleterious use. There is still a lot to be learned about where sacred sites exist, what level of risk they face and about exactly what relationship they have to biodiversity conservation.

From a conservation perspective, sacred natural sites and other places of importance to faith groups exist both inside and outside official “protected areas” as recognised by IUCN The World Conservation Union and the Convention on Biological Diversity. Sacred natural sites can usefully be integrated into protected area systems using any of the recognised management models and governance types. Bringing a sacred area into a national protected area system can increase protection for the site but sometimes at the expense of some of its spiritual values.

The existence of a sacred site within a protected area can also create challenges for managers. Decisions about whether or not to seek to make a sacred natural site or other land or sea area important to faiths into an official protected area therefore need to be made on a case-by-case basis. Making such areas an explicit part of biodiversity conservation strategies has the additional and very important function of bringing conservation issues into the mainstream thinking of faith groups. And it brings the all too often neglected issues of spirit and culture to the foreground of conservation approaches.

Success in co-managing for faith and nature is almost always a matter of developing effective and trusting partnerships between the different stakeholders involved. Today the spiritual values of a site are frequently not considered when planning conservation and conservationists (protected area managers, policy makers, and even NGO staff) often lack the skills or knowledge to deal effectively with sacred sites and the people for whom they are sacred. Further guidance is needed about how sites can best be managed to address the needs of both faith groups and conservation biology, and some suggestions are outlined in the recommendations.

Recommendations

- Many sacred natural sites can and should contribute to biodiversity conservation strategies, although whether this contribution should be inside an official protected area or as part of wider landscape / seascape conservation strategies needs to be determined for each case in turn.
- Given the influence of the faith communities, including direct ownership of land and resources, conservation organisations should be working much more closely with faith groups to identify ways of collaboration.
- Decisions about individual sites need to be taken by all the stakeholders – i.e. by faith groups depending on their own desires and perceptions of what impacts will affect the sacred nature of the site and by conservation specialists about whether the site will be a useful addition to protected area systems.
- By protecting natural areas with sacred significance we are also in many cases protecting a culture and traditions that have existed for centuries. For this reason protection of sacred sites can be an effective way of also protecting a people, culture or ethnic group, while also recognising the role that they play in protecting nature.
- Where a sacred site exists within a protected area, the care of the site should always be an important element in management plans and practice.
- There is still much to be learnt about the links between sacred sites, biodiversity and protected areas and further research is required, particularly with respect to:
 - ✓ the location and status of sacred natural sites
 - ✓ the influence of mainstream faiths on land and water and options for conservation
 - ✓ the biodiversity value of sacred natural sites.
- The value that protected status for sacred sites can bring to faith groups should not be neglected.
- Current guidelines are useful but remain general; further guidelines are needed specifically for major stakeholders, including faith groups, protected area managers and governments.
- Such guidelines need to be based on direct field experience and we propose the establishment of a learning portfolio of new and existing protected areas containing sacred natural sites, specifically looking at the challenges of managing for both values together.

The recommendations include a detailed set of proposals for how WWF can build on its own work and increase its interaction with faith groups around the world.

Part 1: Introduction

Leonard Usongo knows he has sacred sites inside his protected area, but they are so sacred that he is not allowed to learn where they are. The Baka (pygmy) people, who live in the forests of Lobeké National Park in southeast Cameroon, follow a complex faith system that includes the adoption of a personal god in adolescence and the veneration of particular sites – groves and trees – within the forest that are believed to be of high spiritual value. Dr. Usongo, Chief Technical Advisor for WWF's capacity-building programme in Lobeké, spends months of the year in a tented encampment in the park and has many friends among the Baka, working with them on a day to day basis, but it is against their beliefs to allow anyone else to enter a sacred area. Reliant on the Baka for guidance in the dense forests when he is carrying out biological surveys, Leonard has learned over time roughly where the sacred sites are because they are the places he never reaches, however often he asks to be led there... but he also knows that these places are safe for wildlife, being meticulously protected by the Baka¹.



Left: the screen conceals a place where young Baka retreat to be adopted by their personal god, who remains with them all their life. Edge of Dja reserve and World Heritage site, Cameroon.

Right: Local herders hang silk sashes on this sacred bush as offerings to local spirits, Hovd (or Khovd) valley, Mongolia

Nigel Dudley (left); © WWF-Canon / Anton Voraue (right)

In the flat landscapes of northern Estonia, forestry and farmland have coexisted for centuries in a patchwork of woodlands and fields. Although many of the woods contain high levels of biodiversity, there are very few really old trees – and such so-called veteran trees have a unique set of plants and animal species associated with them that are now under threat over much of Europe². A few hundred important exceptions in Estonia are the so-called *prayer trees*, ancient trees once used by Christian communities to attach cloths or papers containing prayers. The tradition probably dates back to pre-Christian worship of sacred trees and provides a startling parallel with the prayer flags more usually associated with some Buddhist traditions. Although the custom has virtually been abandoned many of the trees remain as important sites of biodiversity.

Long before the existence of officially protected areas as we now know them, people were protecting their sacred lands. Sacred sites are probably the oldest method of habitat protection on the planet and still form a large and mainly unrecognised network of sanctuaries around the world. Some researchers believe there may be as many sacred sites as there are protected areas. But today many are threatened. Pollution, infrastructure development, disputes over land, and a general lack of respect for the intangible values of nature are leading to degradation of areas that have sometimes been held sacred by particular cultures for hundreds or even thousands of years.

Links between sacred land and water and conservation are not limited to minority faiths, but there are important links with virtually all faiths around the world. Furthermore, the mainstream faiths, with many millions of followers, have a huge influence on the way in which we view and interact with the natural world. This influence is in large part by shaping people's philosophy and ethics, but also includes more direct links through ownership of land, investment and considerable political and social influence.

Conversely, the practice of biodiversity conservation itself, deeply rooted in "science", with its associated secular and materialistic world-view, can pose a threat to sacred spaces if spiritual, cultural,

and religious values are not taken into consideration adequately when planning conservation management. Imposing an “official” protected area onto a sacred site in a way that prevents its traditional use is likely to cause cultural disruption and resentment, and can paradoxically lead to exactly the type of degradation that the site’s sacred nature had until then prevented.

Through this report, and through subsequent work of WWF on the ground, we hope to encourage conservationists, faiths, and indigenous peoples to collaborate much more closely in a sincere bid to protect both the tangible and intangible values of natural sites.

The interplay between belief systems and nature is complex and deeply rooted. Recognition of this link has grown enormously in the last few years, with statements of support for environmental concerns from all eleven³ of the world’s so-called “mainstream faiths”ⁱ as well as from innumerable smaller and more localised belief systems. There have also been signs that conservation institutions are starting to take the role of faiths in conservation more seriously than they have in the past and for example the World Commission on Protected Areas has a special task force considering Cultural and Spiritual Values.

This report looks at one specific but important aspect of this interaction that has so far been rather neglected; the links between faiths – ranging from major international religions to very local belief systems – and areas that are officially or unofficially protected in ways that also help to maintain wild nature. These links come in two main forms:

- **Sacred places** – both natural sites and built environments existing in natural or semi-natural areas. These can contribute very directly to global conservation efforts because they are often themselves well-conserved, through traditions that sometimes stretch back for thousands of years.
- **Influence of faiths.** Through their philosophy, actions and influence, faiths can have a major impact on the way their followers view the protection of nature.

Biodiversity conservation as a practical and ethical imperative

Halting the unnatural rate of decline of biological diversity – species, ecosystems and genetic diversity – is one of the critical challenges of the 21st century, ranking alongside and often to be balanced with the enormous efforts needed to address human suffering through poverty and conflict. There are many practical reasons for conserving biodiversity, for the benefits it can bring us in terms of new foods, medicines and other materials and for the environmental services supplied by natural ecosystems. However the driving force behind much biodiversity conservation remains, and will remain, primarily ethical. Surveys consistently show that most people believe we have an obligation to avoid extinction of species and races and the destruction of ecosystems caused by our own actions.

Protected areas such as wildlife reserves and national parks are a key tool in biodiversity conservation strategies, providing refuges for species and natural processes that have been eliminated or reduced elsewhere. Roughly a tenth of the world’s land surface is now in some kind of protected area, the vast majority of which were designated during the last century, in what is almost certainly the largest conscious change in land management in human history. However, many of these still only exist on paper and have not really been applied in practice, or are badly managed and continue to lose species. Many plants and animals are currently seriously un-represented in protected areas⁴. However, through a landmark agreement by parties to the UN’s Convention on Biological Diversity, most nations are currently undertaking a major effort to complete ecologically-representative networks of protected areas (more details on these efforts and on the role of protected areas is given in Part 3). The recognition that a proportion of land and water needs to be set aside to provide space for natural species and ecological processes is now accepted by more or less all countries around the world.

ⁱ In alphabetical order: Bahai, Buddhism, Christianity, Daoism, Hinduism, Islam, Jainism, Judaism, Shinto, Sikhism, and Zoroastrianism

Faiths and protected areas

Faith groups interact with protected areas and the concept of protection in several ways, and different faiths or traditions within a single faith have varying attitudes towards nature:

- Sacred sites or built structures of spiritual importance may lie within protected areas in the way described in Cameroon at the start of this chapter.
- Faiths may protect land themselves for a variety of reasons, often completely separately from any official protected area network (and usually preceding it by hundreds or even thousands of years). Indigenous and other traditional peoples often play a key role here as custodians of land and water that they consider to be sacred and many areas of outstanding natural beauty and ecological value have been preserved from interference solely because of their sacredness.
- The mainstream faiths are often important owners of land and major investors, who by their management and investment decisions have the opportunity to play a major role in land management.

These links present tremendous opportunities, which we will be exploring in the following pages. We believe that, if managed correctly, protected areas that encompass sacred sites can in the right circumstances offer **benefits for both faiths and biodiversity**. But they can also create some important challenges as well, such as when the sometimes very different priorities of conservationists and faith groups impact on one small area of land or water. One of the aims of our work has been to explore how faith groups and protected area managers and agencies might gain a better understanding of each others' points of view and thus coordinate their actions more effectively. We also try to identify the conditions in which protected areas might provide benefits to faith groups and vice versa. For example, many sacred sites are "unofficial" protected areas and we will be trying to explore if and under what conditions there might be an advantage in these becoming part of official protected area networks.

Arguments for protection

This report on faiths and nature does not stand alone. It is part of a continuing effort by WWF and other partners to look at the broader benefits that protected areas can deliver to human society.

The project emerged as a result of a conference held by WWF and the World Commission on Protected Areas, in Bangkok in 2000, where it was agreed that there is an urgent need to identify and quantify the wide range of the social and environmental benefits offered by protected areas⁵. Although IUCN The World Conservation Union defines a protected area as "*an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity*", most also play other roles, outlined in the second part of the definition "*and of natural and associated cultural resources*"⁶. As pressures on protected areas increase, and many governments have less funding available to support them, setting aside large areas for biodiversity alone is becoming increasingly difficult to justify.

The *Arguments for Protection* project aims to identify and where possible quantify benefits from protected areas to increase support for protection, identify innovative partnerships and financing mechanisms and to broaden and strengthen management strategies. The first stage of the project looked at the role of forest protected areas in supplying drinking water and was completed in 2003 with the publication of *Running Pure* by the World Bank/WWF Forest Alliance⁷. The wider role of protected areas is now also being examined with respect to, for example, the provision of secure supplies of crops, fish and other materials, recreational and cultural opportunities, protection for vulnerable human communities, health, knowledge and stabilisation against climate change.

As important as making the links in theory is to help to develop these in practice. Protected areas are not a panacea, but offer a set of tools that work in some circumstances and not in others. It may be in the current case that some local communities have no desire to see their sacred sites within any national park or nature reserve and they can fulfil both their spiritual functions and provide benefits for

conservation outside the official protected areas system. In other cases, faiths may want to encourage official protected area status as a way of adding another layer of protection onto a site they already consider to be important. At the southern tip of the island of Madagascar in the Indian Ocean for example, local fishing communities are working with conservation organisations to include a small island and surrounding seas into the national protected area system. The fishermen are interested in protecting their fishing from foreign trawlers that are removing fish at unsustainable levels and in protecting three sacred sites on the island. Conservationists want to protect fragile coral reefs, already battered by dieback following a warm water surge in the last El Nino event and to safeguard the future of a red-tailed tropic bird (*Phaethon rubricauda*) colony that nests among the dry thorny scrubs that survive in the harsh sandy soils.



The current report outlines some of the issues, raises some questions and provides very tentative responses. It marks not an end-point but what we hope will be the continuation and extension of the cooperation that WWF already has with many faith groups around the world. It looks specifically at faiths and protected areas – itself a huge topic – rather than more generally at links between faiths and nature. The report has been prepared in close collaboration with the Alliance of Religions and Conservation (ARC), a secular body that helps the major religions of the world to develop their own environmental programmes, based on their own core teachings, beliefs and practices.

The issues are examined particularly in light of the Convention on Biological Diversity's *Programme of Work on Protected Areas*, which represents the most ambitious global plan to date for increasing and completing an effective protected areas' network and it discusses how faith groups might relate to the CBD on this vitally important task. The report looks both at faith issues in protected areas and the potential contribution of faiths to protected areas and of protected areas to faiths. Lastly it covers both cross-cutting issues relevant to all faiths and also issues specific to particular faiths and cultural traditions within faiths: while there are important commonalities between the ways that virtually all faiths approach aspects of nature there are also very clear and important differences in approach.

We did not start this work solely to produce an academic study. The process of research and writing, and the accompanying long hours of discussion, has convinced us that there is much that the faith and protected area communities can learn from each others' insights and experience.

We call on all faith groups to put the fine statements that they have made about protecting the environment to practical use, through engaging wholeheartedly in the current efforts of the Convention on Biological Diversity to complete an ecologically representative network of protected areas around the planet. And we call on protected area owners, managers and supporters to recognise the importance and legitimacy of sacred values in nature and to work cooperatively with faith groups in ensuring that these non-material values are also effectively preserved within protected areas.

Part 2: Faith and nature

In the Amber Mountains National Park in northern Madagascar, local people look upon one of the high altitude waterfalls as a sacred place, believing that their ancestors' spirits dwell in the trees, water and rocks. Once thought to inhabit the whole region of Antsiranana, the spirits have gradually been driven back to the Amber Mountain as the forests of the surrounding area were cleared to make charcoal or create farmland. Within the national park, a small walkway and viewing platform leads to the waterfall, with illustrated notices to explain the significance of the site and urge visitors to treat it with respect. Kingfishers dart into the water from the surrounding trees and the cliffs above are thick with ferns. Local residents still make a pilgrimage to ask the spirit ancestors for vitality, fertility and purification, while other Malagasy or foreign visitors come to look for birds or just to picnic. None of the activities seem incompatible.

This report starts from the premise that there is often common cause between the interests of faith groups and conservation organisations regarding the management of land and water, even if this has not always been recognised. Because there are many faiths, with different and occasionally conflicting beliefs, this relationship is not based on a single dogmatic principle, but instead on a series of trends and tendencies in the ways that both members of faiths and conservationists view the natural world. Such worldviews are complex and constantly evolving. The current chapter outlines some ways in which faiths, interpreted in the broadest sense, have related to the sacred in nature over time.



The director of the protected area explaining the significance of the sacred waterfall in Amber Mountain National Park, Madagascar

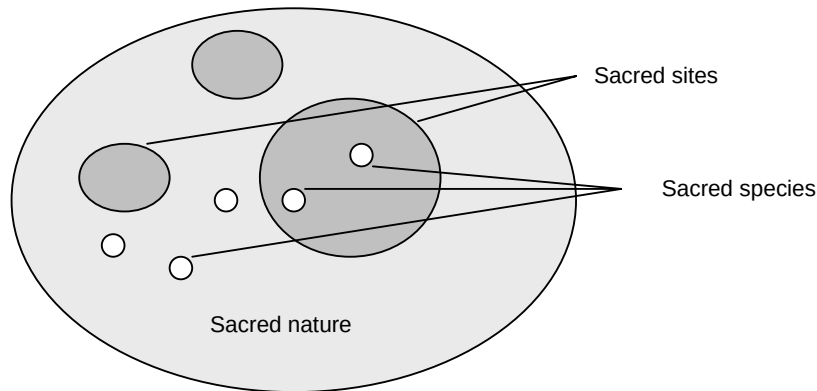
Nigel Dudley

1. The concept of “sacred”

The word *sacred* has various meanings, some linked specifically to a site associated with a deity, although the *Oxford English Dictionary* also includes more general interpretations such as “...dedicated or reserved or appropriated to some person or purpose”. In practice “sacred” can be used in reference to one or other of the so-called mainstream faiths, to a multiplicity of smaller faiths and perhaps also more generally to places that have particular importance to communities, groups or even individuals.

The full meaning of the term “sacred” has challenged thinkers for millennia, including philosophers working within particular religious or spiritual frameworks and, more rarely, those looking for overarching themes that unite many different spiritual concepts. Attempts to understand what the concept means to society have come from people who both accept and reject the literal truth of particular belief systems – for example we could contrast the writing of devout Sufi sages⁸ and Christian mystics⁹ with those of early psychoanalysts who saw religious belief as an artefact¹⁰, or political activists who criticise the political role of organised religion¹¹. There have also been some overview analyses, such as the pioneering account of the psychology of religion by William James, *On the Varieties of Religious Experience*¹². Others have taken a less academic approach and attempted instead to distil key concepts by drawing on sacred writings from many sources: *The Perennial Philosophy* by the eclectic novelist and essayist Aldous Huxley¹³ is a well known example. Because the significance of the sacredness varies depending on the opinions and beliefs of particular cultures and individuals it is impossible to reach universal agreement.

Fortunately we don't have to understand everything about the concept of sacred in order to take account of its significance in everyday life, including to the management of areas of land and water that have value to particular faith systems. But we do need to agree in broad outline about what might constitute sacredness in this context. Below we look at three issues: **sacred nature**; **sacred species** and **sacred natural sites** (see diagram below). We then look more generally at the relationship of both traditional and mainstream faiths to nature.



Visual representation of the sacred in nature

A rough typology of the relationship between faith and nature is given below; this table forms the framework for much of the discussion that follows.

Type	Description	Examples
Sacred species		
Individual plant	Typically a particular sacred tree or other "monumental" long-lived plant	✓ 300 Christian prayer trees around Estonia ✓ Ancient trees preserved outside Shinto temples in Japan ✓ Trees decorated by Buddhist monks in national parks in Thailand
Individual animal	Particular, often long-lived animal with spiritual value to a faith or community	✓ A single, ancient freshwater turtle in one of the lakes in the old city of Hanoi is sacred to Buddhists
Plant species	Species that has importance to a faith or faiths	✓ The olive tree has significance in Judaism, Christianity and the creation myths of ancient Greece and Rome
Animal species	Species that has importance to a faith or faiths	✓ The orang utan has spiritual value to the people of Sabah and Sarawak ✓ The crocodile is sacred to people in Mali
Sacred natural site		
Enduring feature	Typically a rock formation, water feature or other geographic feature	✓ Many rock formations in Australia and New Zealand are sacred to Aboriginal and Maori communities ✓ The Ganges river in India is important to Hindus, Jains, Sikhs and Buddhists ✓ Mount Athos – important to the Greek Orthodox Church and Montserrat to the Spanish Catholic church ✓ Sierra Nevada de Santa Marta in Colombia, sacred to the Tairona Confederation
Natural site	An area of woodland, coastline or other habitat with spiritual importance	✓ Sacred groves exist in many countries, e.g. the <i>kaya</i> forests of Kenya, sacred forests in Ghana, Madagascar and India
Semi-natural site	Area of semi-cultivated land that has spiritual importance and may also sustain biodiversity	✓ <i>Tembawang</i> fruit gardens in Kalimantan are both of practical and spiritual importance and also, although artificial, often the richest repositories of biodiversity within cultural landscape areas of Borneo

Type	Description	Examples
Built monument within a protected landscape	A current or past temple, shrine or other built structure existing within a protected area	✓ Standing stones within protected areas in UK national parks ✓ Termessos Roman temple existing within a strict nature reserve in central Turkey
Built monument with incidental ecological value	A building or buildings preserved for cultural or spiritual purposes, which exist in grounds that also have value to biodiversity	✓ The Angkor Wat temple complex in Cambodia is a World Heritage site protected for its architecture and still used as a Buddhist temple, but is also set in 30,000 ha of forest that has biological value
Landscape/seascape	Larger area that has spiritual value	✓ Parts of the Sierra Nevada Mountains in California

Table 1: A typology of sacred nature



Bayon Temple,
Angkor, Cambodia

Sue Stolton and Nigel
Dudley

1a) Sacred nature

The most direct link is that many faiths regard all nature, or particular elements of the natural world, as being imbued with sacred value. For thousands of years, humans venerated the cycles of nature in various ways, often in association with ancestors and in some places with a strong emphasis on the regenerative and feminine aspects of nature.

One of the consequences of these ancient traditions is that the the most direct relationship between faith systems and the natural world is therefore the belief that plants or animals have particular sacred value. For some contemporary faiths, almost *every* living thing is sacred and is treated accordingly. Jainism, Buddhism and Hinduism promote compassion to all living creatures¹⁴ and Digambara Jains, i.e. members of the strictest sect, follow an exclusively vegetarian diet; monks even sweep the ground as they walk to avoid inadvertently stepping on living creatures. The ancient Egyptians had a similar generalised belief in the sacredness of nature although local towns often had their own specific sacred animals and animal cults would also regularly mummify particular sacred animals. The sacred ibis (*Threskiornis aethiopicus*) for example, was worshipped as Thoth, the god of knowledge.

1b) Sacred species

Other faiths attach importance to individual species or groups of plants and animals, which over time come to be regarded as sacred, or perhaps *particularly* sacred, and as possessing or reflecting some unique aspect of the divine. Although there are many different reasons why a particular species or individual plant or animal acquires spiritual importance, it is possible to identify a broad typology:

- ✓ **Valuable species:** species that have high subsistence and/or economic value to communities and have therefore probably attained sacred value over time as a result of the central role that they play in peoples' lives – for instance many large game animals are regarded as sacred, as are plant species that have multiple uses such as the olive (see box on page 16).
- ✓ **Impressive species:** species that are regarded as sacred because they are different or physically outstanding enough to be seen as representing some aspect of the divine – this may for instance be due to large physical size, or a particularly startling appearance. Examples might be the baobab trees in Eastern Africa and Madagascar¹⁵, which are often the last trees left after forest is cleared, or large animals such as elephants and whales.

- ✓ **Impressive individuals:** individual plants or animals (or even inanimate nature such as rocks and hills) that attain sacred value by virtue of some peculiarity, for instance great age or size or sometimes because they resemble something else. Examples include trees that look like humans or other animals – even if the tree species is not in general accorded any particular importance (see table 2 below).
- ✓ **Inspirational species:** species that through their usefulness, character and other attributes provide a model for humans. For example, the cow is not only a useful species for Hindus but also provides inspiration with enormous patience, generosity, strong maternal instincts, gentleness etc.

There are also species that on occasion fulfil some kind of mirror image or dark side of the divine, which come to represent lack of cleanliness or even evil. The presumed role that crows and ravens play as witches “familiar” or servants is an example of the latter, and many European traditions depict them as harbingers of death, although in the old Greek religion the raven was consecrated to the god Apollo, and the carrion crow to Athena because of their courage and intelligence and in North America they were more generally regarded as prophets¹⁶.



Sacred nature can take many forms, from domestic animals to particular wild species or individuals.

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Such a typology can only ever be indicative. The Egyptians under the pharaohs demonstrated the tendency for useful or impressive species to attain sacred status; for example sacred values were assigned to most utilised or domesticated species (cattle, goats, sheep, cats, dogs) and to physically impressive species (lions, crocodiles, hippopotamus). But the Egyptians regarded species with less obvious attributes as sacred including the shrew mouse (*Mygale*), a particular species of sacred hawk, the asp snake and most famously the scarab beetle (*Scarabaeus*), adopted as the emblem of creation¹⁷. Similar traditions survive today. The *Akan* people in Ghana still have a tradition of totem animals and several clans have a wild animal or plant species, ranging from the raffia palm (*Raffia hooker*) to the leopard (*Panthera leo*)¹⁸.

Although for some faiths sacredness implies complete protection, in other cultures the fact that a plant or animal is regarded as sacred does not necessarily mean that it is free from interference. Many hunting societies believe that the animals they kill are sacred and the complex rituals surrounding the hunt are often reflections of this. It is however, interesting to note when looking at sustainable management options, that because of the sacred nature of the hunt, an implicit limit to the number of individuals hunted is respected. For twenty thousand years, the critical role of the hunt was depicted in cave paintings in virtually all settled areas of the world; but in many societies the advent of settled farming and reduction in importance of the hunt (in part related to the end of the ice age) signalled a disappearance of painting as an art form for centuries¹⁹. In other cultures, where hunting remained a dominant means of subsistence, such painting continued for far longer and for instance the cave paintings of the now extinct San bushmen in South Africa are almost all related to hunting.

Similar perspectives survive today. The hunting of the bowhead whale (*Balaena mysticetus*) by the Inuit people of Alaska is surrounded by complex beliefs and, at least until quite recently, by taboo, magic formulae and the use of amulets²⁰. Writing in 1978, the Mayor of the North Slope Borough and political leader in the fight for Inuit independence said: “The taking and sharing of the whale is our Eucharist and Passover...the Arctic celebration of the mysteries of life”²¹. Many Inuit whalers believe that the bowhead only allows itself to be captured if it favours the hunter or the village and the whale

skull is thrown back into the sea to allow its spirit to return²². The failure to land a whale by Barrow whalers on the North Slope of Alaska in the spring 1982 hunt was ascribed by some as being due to their having been strife in the village over the hunt²³.

The “sacred” nature of the hunt often outlasts the hunter-gatherer lifestyle and has been reflected for instance throughout European history, where many hunt rituals stretch back to origins before the emergence of Christianity. In some of the recently banned fox hunts in the UK, hunters still smeared a dab of blood from the animal they had killed onto the forehead of the youngest woman present, who traditionally should have been a virgin. Because it has long been the subject of discussion and description, fox hunting also illustrates the ways in which some faiths distinguish between “good” and “bad” nature in religious terms. For instance, in England the Jacobean preacher John Rawlinson explained that the Old Testament of the Bible intended that the righteous man should be merciful to “cattle and helpful beasts”, while foxes were on the other hand “...not helpful but hurtful...and therefore no pity [is] to be had of them”²⁴. Contemporary ideas and prejudices thus influence and change attitudes to nature over time by interpreting scriptures and spiritual teachings in varying ways.

The link between one species and one faith is often not exclusive; as described below the olive tree has importance to virtually all the faiths that emerged from the Middle East. Conversely the pig is regarded as an unclean animal by both Jews and Muslims. In many cases the importance of a particular species may predate the faith that currently recognises its importance. Sacred nature has often been recognised by different and successive faiths over time, perhaps to an even greater degree when it comes to sacred sites, as described below.

Some examples of sacred species: Assigning sacred values to particular species and individuals still exists all around the world, cutting across many faiths (including some of those that in theory reject such “idolatry”). The brief descriptions below give some idea of the vast range of examples that exist.

- ✓ **Bali, Indonesia – long-tailed macaques:** the people of Bali, the Hindu island in the middle of mainly Muslim Indonesia, regard the long-tailed macaque monkeys (*Macaca fascicularis*) as sacred²⁵, where some live as temple monkeys. Its sacred value is also recognised in parts of Kalimantan, again showing that recognition of sacredness often extends beyond a single faith.
- ✓ **Vietnam – a sacred turtle:** the continued presence of what is believed to be a single, very old turtle in Hoan Kiem Lake in central Hanoi has taken on a spiritual significance for many Vietnamese. Occasional sightings of the turtle, especially from the Ngoc Son temple on the lake, are widely reported. Turtles have long been symbols of wisdom in Vietnamese tradition²⁶.
- ✓ **Guatemala – quetzal:** the quetzal (*Pharomacrus mocinno*) was the most sacred bird associated with the highly advanced Mayan civilisation, the ancestors of 80 per cent of modern day Guatemalans. It is the emblem of Guatemala but is now highly endangered due to poaching and habitat destruction.



Hoan Kiem Lake in central Hanoi, home of an ancient turtle believed to be sacred by many Buddhists

Nigel Dudley

- ✓ **West Africa – leopard cults:** many groups regard the leopard as a sacred animal, for instance the Ashanti people, where killing a leopard was traditionally punishable by death²⁷.

The role of trees as sacred nature has particular importance because of their longevity, associated symbiotic and parasitic species and, in the case of sacred groves, importance in supporting an associated ecology along with their cultural values. The largest and longest-lived species can survive for one or more millennia and play a long-term role in cultural identity. Most faiths existing in ecosystems that support massive, ancient trees have reverence for particular species or individuals.

Case study: the olive tree: The olive tree has played a central role in the culture, economy and faiths of various cultures and countries of the Middle East. The oldest cultivated tree in history, *Olea europaea* was being grown in Syria and Crete at least five thousand years ago²⁸. Its wild ancestor has not yet been identified, although several myths refer to Hercules bringing the tree back from his travels²⁹. In the post-Mycenaean civilisation of the late Bronze Age, olives were favoured over grains because they survive drought and poor soils³⁰. The Egyptians imported olive oil and the establishment of olive groves accompanied the spread of civilisation throughout the Mediterranean and Middle East³¹. Its great value, as a source of oil, wood and fuel, has been matched by its central role in the traditions shaping virtually all the past and present faiths of the region – an example of the strong link between the practical and spiritual.

The Greeks believed that Pallas Athene, the goddess of wisdom, planted the first olive at the gates of Athens, thus winning a competition with the sea god Poseidon over who should be the city's protector; Pliny the Elder writing in AD 75, believed that the original tree still survived³². Olives featured in many other stories of the Greek gods and olive branches were often buried with the dead to ensure that their souls successfully crossed the River Acheron to the underworld on Charon's boat³³. In Roman tradition the goddess Minerva spread the knowledge of growing olive trees and victorious generals and emperors were crowned with olive wreaths.

The olive tree in turn became central to Judaism, and for example a dove carried an olive branch to Noah in the ark to demonstrate that the great flood was subsiding. More generally the cultivation of olives was seen by the Israelis as deeply symbolic of a change from a nomadic lifestyle after years of wandering; their slow growth and longevity mean that they are suited only for permanent communities. The Christian faith recognises the Mount of Olives outside Jerusalem as the place where Jesus gave the most complete statement of his philosophy and the night before his trial and crucifixion was spent in the olive groves of the Garden of Gethsemane; both sites still survive. The apostle Paul uses the olive tree as an allegory to describe God's relationship with the Jewish people in his *Letter to the Romans*. In many parts of the world, blessed olive branches are handed out at Catholic masses on Palm Sunday. The *Qu'ran* continued a long tradition of reference to the olive and Muhammad recommended his followers use olive oil on their bodies. Olive trees continue to be held in high esteem throughout the region and for instance olive trees associated with the tomb of a saint are still decorated with cloths in Syria³⁴ and the symbolic role of olive groves is frequently referred to in the Palestinian-Israeli conflict.

Today traditional olive groves are frequently under threat, along with the associated biodiversity, and are the subject of conservation action³⁵.

Table 2 overleaf summarises some sacred trees around the world³⁶; there are many other examples.

Country	Species	Details
China, Korea and Japan	Ginkgo (<i>Ginkgo biloba</i>)	Revered by Buddhists in China and Korea and long planted as a temple tree. The species was introduced into Japan less than a thousand years ago. A ginkgo tree survived 800 metres from the epicentre of the nuclear bomb at Hiroshima ³⁷ .
India, Nepal, Sri Lanka etc	Banyan tree (<i>Ficus benghalensis</i>)	Protected because it is considered sacred but also because of the shade it provides. Strict regulations control its use; some are reserved for elephant fodder. Some scholars propose that the tree of life in the Garden of Eden was a banyan ³⁸ .
	Bodhi tree (<i>Ficus religiosa</i>)	The tree beneath which the Buddha gained enlightenment and the most sacred tree to Buddhists is also considered sacred by Hindus.
Japan	Several species	Ancient trees are protected in the grounds of many Shinto temples, frequently being decorated with cloths and other ornaments. Such trees now have a high conservation value because most of the natural lowland forest has been cleared ³⁹ .
Mongolia ⁴⁰	Tamarisk (<i>Halaxylon ammodendron</i>) and others	The Buddhists of the Gobi worship the tamarisk. It is also common to praise single trees, called <i>Udgan Mod</i> , meaning "sacred", by placing <i>Khadak</i> and offerings at their base. It was taboo to chop these trees down, and in some places even to approach them.
	Birch (<i>Betula</i>)	The birch was considered to be faithful to humans and livestock because it was commonly used as poles for gers (yurts), saddles, loops etc.
Madagascar	Baobab (<i>Adansonia</i>) – 6 species	Considered holy and to be the home of spirits, often in consequence protected even when the rest of the forest has been logged or cleared.
Europe	Yew (<i>Taxus baccata</i>)	Sacred to the early Celtic and Nordic tribes, believed to be immortal and a symbol of everlasting life. Some churchyard yews are so old that they predate Christianity ⁴¹ .
	Oak (<i>Quercus robur</i>)	Sacred to the ancient Norse, Germanic and Celtic peoples and to the Greeks and Romans, associated with gods of thunder and also with fertility. Individual trees have become shrines ⁴² .
New Zealand	Kauri (<i>Agathis australis</i>)	Sacred tree to the Maori, who believed that it possessed its own spirit. The oldest known living specimen is 2100 years old.
	Totara (<i>Podocarpus totara</i>)	Believed to share a common ancestry with the Maori and therefore to be an elder of living Maoris.
Chile	Monkey puzzle tree (<i>Araucaria araucana</i>)	Sacred to the Pehuenche people who regard it as a "mother" and believe that god created the trees for them and that it is their duty to protect them.
Mexico	Montezuma Cypress (<i>Taxodium mucronatum</i>)	Sacred to the ancient peoples of Mexico and linked to Zapotec origin tales; the oldest are estimated to be anything from 2-4000 years and the largest has a girth of over 30 metres.
United States	Giant redwood (<i>Sequoiadendron giganteum</i>)	American redwoods are sacred to the Tolawa people of the coastal areas of California and Oregon. The oldest known specimen is estimated to be 2,700 years old.

Table 2: Examples of sacred trees from around the world



Left: Araucaria trees live up to 2000 years and are considered sacred by the Pehuenche. Under threat in some parts of the country, many of the oldest Araucaria are in protected areas.

Right: A Massive Kauri tree in the Waipoua Kauri forest. North Island, New Zealand.

Sue Stolton (left); © WWF-Canon / Edward Parker (right)

1c) Sacred natural sites

The third way in which faiths relate to the natural world is through identification of particular places as having higher than usual spiritual values – so-called “sacred sites”. Many of these are natural or semi-natural areas but it is also possible in some cultures to create sacred sites through gardening or planting.

While some sites are extremely old, with links to successive faiths stretching back thousands of years, others are still emerging. An example of the latter is a recently-discovered early landing place of settlers in Madagascar that has been the subject of archaeological digs and is now also receiving sacrificial gifts from local inhabitants⁴³. Hindu faith groups are also still adopting different sacred natural sites in countries where they have recently settled. As with sacred species, an approximate typology of sacred sites can be identified:

- ✓ **Sacred natural site:** an area such as forest, woodland, coast or mountain that has spiritual importance. Sacred natural sites can encompass virtually any land or aquatic habitat; a set of examples (by no means complete) is outlined below. While many are small, large-scale sacred landscapes also exist; for example when a particular culture attaches spiritual value to the whole of a country or region. In most cases, access is strictly controlled, for example being confined to religious leaders or elders, although in other places access is open to anyone so long as they show respect and conversely a few sites are totally off-limits, being retained wholly for the gods or spirits. There is usually an identifiable religious figure in charge and a strong sense of acceptance from the local community. Many sacred sites also contribute more practically to livelihoods by supplying resources⁴⁴. Some examples are given in Table 3.

Type of sacred site	Examples
Grove or woodland	Sacred groves are found in virtually all tropical and many temperate and boreal countries and can either be distinct areas of woodland or part of a larger forest. A survey of 4875 sacred groves in India, for example, is believed to include only a small percentage of the total sites, which the authors estimate to be between 100,000 and 150,000 ⁴⁵ .
Individual trees	Many cultures have relationships with particular tree species or even individual trees, and they themselves become the equivalent of shrines or sacred sites. The totara (<i>Podocarpus totara</i>) is the sacred tree of the Maori people of New Zealand, believed to have a spirit and a common ancestry with the Maori people and therefore to be an elder of living Maoris. The oldest known specimen, on North Island, is 1800 years old ⁴⁶ .
River	Some rivers attain sacred status, although attention tends to be focused upon particular sites. The River Ganges, flowing from the Himalaya to the vast delta between India and Bangladesh has high significance to Hindus and bathing in the river frees the bather from sin. It is also a cross-cultural religious site ⁴⁷ .
Pond or lake	Many small ponds and lakes are sacred, often because they contain particular species such as crocodiles. However even large freshwaters can have sacred value and for example many places around Lake Baikal in Russia are regarded as sacred by the Buryats, an indigenous people of the area and there are many shrines around the shores that receive regular offerings ⁴⁸ .
Spring	Springs often have sacred value and for example in the Christian tradition many are associated with particular saints or are supposed to have healing properties, most famously at Lourdes in France. The Suttasaja spring in Finland is a traditional site of spiritual importance to the Sámi people of northern Europe, currently under threat as a result of plans to sell bottled water from the area.
Mountain	Sacred mountains are found in many cultures and are often virtually no-go areas, thus being completely protected from interference ⁴⁹ . Sacred mountains include the holy hills of Xishuanbanna in Yunnan, China ⁵⁰ ; Hua Shan (Daoist) and Omeislan (Buddhist) also in China; the central range of mountains in Venezuela; and Gauri Shanker peak in Nepal ⁵¹ .
Volcano	Volcanoes, particularly those that remain active, are likely to be adopted as sacred natural sites, such as the active volcano of Ngauruhoe in New Zealand.
Rock formation	Many Australian aboriginal creation stories are linked to “dreamlines” or ancient pathways associated with particular geographical features, including rocks and other natural features. Uluru, or Ayers Rock, in the central Australian desert is a particularly well known sacred site, associated with spirit children being linked to their aboriginal mothers ⁵² ; it is also a protected area.

Type of sacred site	Examples
Island	Islands have long held sacred value, particularly if they are remote, as evidenced by Easter Island, but even those near to shore can be important. The island of Nosy Vey in northern Madagascar, an almost perfect conical shape covered with forest, is so sacred that no humans are allowed to land and local people propose that it becomes a strictly managed protected area ⁵³ . In China, Pu To Shan island is sacred to Buddhists and is dedicated to Guan Yin.
Beach	Varkala sacred beach in Kerala, southwest India remains an important Hindu pilgrimage site despite the ever growing number of tourists. St Ninian's cave and beach in southwest Scotland is a sacred site in the Christian faith.
Landscape	Even very large landscapes can contain sacred values. The Yosemite Valley in California, now one of the oldest national parks in the world, has for many centuries been a sacred landscape for First Nations groups in the region and these values are gradually being recognised by other Americans.

Table 3: Types of sacred natural sites



Left: The Galoway coast, that St Ninian – bringer of Christianity to Scotland – would have looked upon from his retreat in the rocks.

Right: Varkala Beach, Kerala, India, an important sacred site for Hindus and popular beach resort.

Liza Zogib and Ihab Zogib

- ✓ **Sacred semi-natural site:** not all sacred sites are wholly natural, but may instead be quite carefully cultivated. The *tembawang* gardens of western Kalimantan, in the Indonesian part of Borneo, are almost wholly cultural sites. At first glance they look like natural forests but have generally been planted as intense fruit gardens, with up to 400 species. They also function as burial sites and are regarded as sacred by the local Dayak people. In the heavily modified landscapes of the region they are also often the principal repository of wild biodiversity⁵⁴. Research has shown that they have practically the same proportions of species as mature natural forests⁵⁵. The *Kaya* forests of Eastern Africa (see case study on page 73) whilst natural are also quite carefully managed.
- ✓ **Built site with remaining natural vegetation:** even constructed sacred sites, such as a temple or shrine, often maintain natural values because the area around is left free of interference (particularly in cultures where it is not commonplace to cultivate formal gardens around sacred structures). Examples might include the Angkor temple complex in Cambodia⁵⁶, contemporary Orthodox Christian churches in Ethiopia and the Roman temples at Termessos in central Turkey, that are preserved inside Termessos National Park, which also supports populations of regionally uncommon species such as the jackal (*Canis aureus*), ibex (*Capra ibex*) and brown bear (*Ursus arctos*)⁵⁷.

We only have a very vague idea about the number of sacred sites in the world, although some commentators believe that there are as many sacred sites as there are protected areas. The majority of these are probably relatively small, although there are important exceptions, such as the landscape of the Yosemite National Park. In some cultures, such as the aboriginal Australians, sacred sites are so common and interconnected that they in effect cover large landscapes in a complex network.

The extent to which different faiths attach importance to natural features varies enormously and in turn greatly affects the likelihood of a particular faith recognising natural sacred sites. Many traditional faiths are tightly bound to specific locations – sacred groves, trees, rock formations and so on. Similarly, most Eastern faiths place strong emphasis on links with the natural world including with particular features, trees, groves and species as representing aspects of the sacred. However, Islam, Judaism and Christianity have a more distant relationship to nature in part because they all have, to a

varying degree, teaching against idolatry, which can include rejection of sacred natural sites if these are seen as exalting a single place above a more ethereal concept of the divine. The history of Christianity for example shows periodic backlashes against idolatry and the English term *iconoclast*, which today refers to anyone who attacks cherished beliefs, arose from various movements against the use of images in religious worship in churches. During the English Civil War parliamentary troops even chopped down the Glastonbury Thorn, a famous tree supposedly sprung from the staff of St Joseph of Arimethea⁵⁸. Such influences will be discussed in more detail below.

Today, many sacred groves are at risk, from multiple factors including breakdown in cultural values, pressure on land from local people for farming and other forms of development and pressure from the outside, including poaching, legal and illegal logging, mining and pollution⁵⁹.

Despite the doctrinal disputes, in practice all faiths attach importance to particular natural sites even if this is just applied in a local and informal way – many Christians and Muslims in Africa for instance still maintain sacred natural sites that can be traced back to traditional faiths. The way in which different faiths react to such sites, or wish them to be maintained is likely to differ markedly and management of such areas needs to be based on an understanding about local cultures and belief systems rather than expecting one response to fit every situation.

2. An overview of the relationship between traditional belief systems and the natural world

Ancient faith systems: in addition to the mainstream and more localised faiths discussed below, there are also many shrines and sacred places associated with earlier faiths, which have virtually or completely lost their followers although they often do maintain a cultural and historic value. The Megalithic standing stones and tombs of Europe fall into this category, as do the Mayan temples of Central America. Many of these sites retain importance to both local communities and more widely – one reason why so many have not been destroyed. These ancient remnants of earlier faiths also pose management issues if they fall within protected areas and, if protected, can in turn offer conservation benefits. In this report we consider several ancient faith systems as they relate to protected areas and believe that it is often appropriate to treat them in the same way as contemporary sacred sites.



Bryn Cader Faner, in the Snowdonia National Park, Wales, is a Bronze Age sacred site currently protected within an IUCN Category V landscape protected area.

Nigel Dudley

Traditional faith systems: Virtually all traditional faith systems have a direct link to nature, through sacred species, sacred natural sites and in some cases a broader belief in the existence of god through nature, which we summarise here as sacred landscapes or seascapes. Although faith systems vary between individual communities, two broad traditions can be identified: in the eastern Asia/Pacific Rim region and in Europe and Africa. Most traditional faith systems see existence as a living blend of spirits, nature and people: the word “religion” does not exist in many such cultures as its tenets are so closely interwoven with everyday life as to be indistinguishable. Indigenous people believe that spirits permeate and animate matter, meaning that natural phenomena encompass spirits. In turn, spirits can affect nature, sometimes in response to human actions; for instance moral transgressions can trigger natural calamities⁶⁰. There are many exceptions to these generalised tendencies and traditional faith systems include a huge range of philosophies and approaches to interpreting life and the world.

Environmentalism as a faith system: We have so far discussed faith and its relationship to nature, but what of conservationists and their relationship to faith? Within the current context, many conservationists would regard an intense love for and empathy with nature itself as in part an appreciation of sacred values. Fritjof Capra writes: “Ecology and spirituality are fundamentally connected, because deep ecological awareness, ultimately, is spiritual awareness⁶¹”. The writer Laurens van der Post referred to “wilderness” as “a highly sacred atmosphere”⁶². For some people, ecological awareness will itself be an aspect of their wider faith, for others it may emerge from a secular or humanist philosophy. In particular the “deep ecology” movement consciously draws spiritual parallels in its interpretations of the natural world⁶³. Here the interface between *sacred* and *cultural* can become blurred, although this may not matter because management options are much the same. Some conservationists are surprised when people regard their zeal to conserve biodiversity and protect the environment in the same light as they might a faith, but the parallels are often quite apparent and far from negative; the common ground between conservationists, whatever their own spiritual beliefs, and members of any faith community is often greater than imagined. More generally, many conservationists are also members of faith groups.

3. The relationship between mainstream faiths and the natural world

Although there are an uncounted number of different faiths and belief systems in the world, most people belong to one of the so-called “mainstream faiths”, consisting of eleven different spiritual belief systems: in alphabetical order Baha’i, Buddhism, Christianity, Daoism, Hinduism, Jainism, Judaism, Islam, Shinto, Sikhism and Zoroastrianism. Of these two currently dominate, with over half the world’s population declaring themselves to be either Christian or Muslim, although there are many different traditions in both, sometimes with very different interpretations of their faith.

Conversely, most sacred sites currently in protected areas as recognised by IUCN probably belong to faiths with relatively few followers and discussions about the link between protected areas and faiths has tended to focus primarily on indigenous peoples and traditional spiritual beliefs. Indeed, because protected areas tend to be in fairly natural landscapes and seascapes, they may well contain a disproportionate number of sacred natural sites. Whilst this role is clearly extremely important, it is only one part of a larger picture of the relationship between faith and nature. Taken together, the world’s eleven major faiths are perhaps the largest single investor group in the world and almost certainly the largest landowner. They are also, by their nature, driven by values that include a strong ethical component. The relationship of the major faiths with the natural world, the principles of conservation and more narrowly with the movement to create a global protected area network is therefore extremely significant.

Today the nuances of the relationship between nature and the sacred vary enormously between and within faiths. On the one hand they are sometimes accepted as central tenets of faith, while in other cases any direct link between species and religious belief is regarded as little more than folklore and frowned upon by religious authorities, or even rejected as idolatry or heresy.

At the risk of simplification, the mainstream faiths can be divided into two broad philosophical streams. Those originating in the Indian subcontinent, China and Japan (Buddhism, Daoism, Hinduism, Jainism, Shinto, Sikhism and Zoroastrianism) all regard nature as a critical aspect of the Divine that should accordingly be treated with reverence. Sometimes this manifests itself as quite a strict form of protection, as is found in some traditions within Jainism, Buddhism and Hinduism, while in others the reverence does not preclude active exploitation. Until recently Shinto was unusual in that the focus of sacred nature was almost entirely within Japan, although this is now changing.

In contrast, the relationship of the three monotheistic faiths (Christianity, Judaism and Islam) with nature has been more variable. The strong teaching against idolatry meant that the concept of sacred species or sacred sites was rejected, in some cases quite violently. For instance Christian missionaries in keeping with their attempts to convert communities have sometimes deliberately destroyed sacred trees or groves.

There has in consequence been a certain amount of controversy over the main monotheistic faiths' approach to nature. In 1967 in a famous article in *Science* Lynn White (a professed Christian) blamed these faiths, particularly Christianity, for helping to cause environmental degradation⁶⁴. He argued that Western, individualistic lifestyles have led to a "neoclassical economic paradigm" of consumerism that has been detrimental to the natural world. The environment was viewed as God's creation for Humankind and therefore, Christians (but also Jews and Muslims) have tended to use and abuse "Nature" since it was regarded as being provided by God to serve them in their worldly pursuits. In all three of these faiths humans have tended to strive towards being more in "God's image" and therefore, in many respects have purposefully distanced themselves from nature, which they have instead, sought to master and dominate.

White's critique drew a strong response, particularly from the Christian faith that had been the main target of his criticism. In the following years a number of statements were made by religious leaders relating to the environment. For instance, in 2002 Pope Jean Paul II and Patriarch Bartholomew I issued a joint declaration on the importance of protecting our environment⁶⁵: "Respect for creation stems from respect for human life and dignity. It is on the basis of our recognition that the world is created by God that we can discern an objective moral order within which to articulate a code of environmental ethics. In this perspective, Christians and all other believers have a specific role to play in proclaiming moral values and in educating people in ecological awareness, which is none other than responsibility towards self, towards others, towards creation". In March 2005, the Archbishop of Canterbury made a strong speech about the need for the church to engage more fully in environmental issues: "Social collapse is a real possibility. When we speak about environmental crisis, we are not to think only of spiralling poverty and mortality, but about brutal and uncontrollable conflict"⁶⁶. More importantly, over time some practical responses have emerged in terms of addressing conservation issues. In the Western faith tradition, at least, the importance of nature could be said to have decreased over time but perhaps now be increasing again.

The following section summarises the relationship of some mainstream faiths to both the natural world and where possible more directly to protected areas. Faiths are discussed in alphabetical order.

Bahá'í: The Bahá'í faith was founded in the 19th Century by the Persian Bahá'u'lláh in a splinter from Islam. Its main message is that all religious leaders are manifestations of the unknowable god and that all scripture is sacred. Bahá'ís support peace and have a strong emphasis on equality; they reject drugs and alcohol. There is no priesthood and since 1963 they have been governed by elected assemblies locally, nationally, and internationally. There are around 6 million Bahá'ís around the world.



Bahá'u'lláh, the founder of the Bahá'í faith; Bahá'í Lotus Temple, Delhi (bottom right); Lotus, symbol of spiritual unfoldment, important also in Hinduism and Buddhism.

Liza Zogib

To Bahá'ís, the natural world is a reflection of the divine reality. The Bahá'í scriptures refer to Nature and Scripture as the "two books" of revelation, through which God speaks to humanity, and their writings are rich with natural analogies and stress the interconnectedness of life on the planet. In this spirit, Shoghi Effendi, Bahá'u'lláh's great-grandson and custodian of the community from 1921 to 1957 noted in 1933 that: "We cannot segregate the human heart from the environment outside us and say that once one of these is reformed everything will be improved. Man is organic with the world. His inner

life moulds the environment and is itself also deeply affected by it. The one acts upon the other and every abiding change in the life of man is the result of these mutual reactions”.

Over a century ago, Bahá'u'lláh declared that “The well-being of mankind, its peace and security, are unattainable unless and until its unity is firmly established. Our current ecological crisis has been caused by a materialistic society living a life out of balance, unaware of the sacredness of the natural world, of the true purpose for human society, or of the fundamental unity binding us together”⁶⁷.



Left: Buddhist shrine in Mongolia
Right: Mayadewi temple in Lumbini. The Lord Buddha, was born in the famous gardens of Lumbini, which soon became a place of pilgrimage. The site is now being developed as a Buddhist pilgrimage centre, where the archaeological remains associated with the birth of the Lord Buddha form a central feature. The site is within the forest buffer zone next to Royal Chitwan National Park, Terai Arc, Nepal

Alexander Belokurov (left), © WWF-Canon / Jeff Foott (right)

Buddhism: Buddhism teaches that respect for life in the natural world is essential, underpinning the interconnectedness of all that exists. The faith emerged in the fifth century BC, at a time when the creation of towns and expansion of an agrarian economy led to the clearing of forests. In the Buddhist Eden, the earth flourishes naturally, but human greed leads to division and ownership of the land, creating violent conflict and destruction. Buddhists generally see the world as conjoined on four levels: existentially, morally, cosmologically and ontologically. Existentially, Buddhists affirm that all sentient beings share the fundamental conditions of birth, suffering, old age and death. The concepts of *karma* and rebirth (*samsara*) integrate the existential sense of a shared common condition of all sentient life forms with the moral nature of the Buddhist cosmology. The inclusion of plants and animals in Buddhist schemes of salvation is important philosophically because it attributes inherent value to nonhuman forms of life⁶⁸. Forests are particularly important in Buddhist thinking, the Buddha Gotama was born, attained enlightenment and died under trees. The textual record, furthermore, testifies to the importance of forests, not only as an environment preferred for spiritual practices such as meditation, but also as a place where the laity sought instruction. Buddhism includes regard for many sacred trees, which are sometimes decorated⁶⁹.

The faith also sometimes creates practical protection measures. For instance, a long-standing practice in eastern Bhutan, *ridam* is the annual prohibition on entering or using a designated mountain forest from mid-August to mid-October. This is a form of “seasonal protection” that conserves young animals and plants during the late monsoon-growing season. There are two powerful motivations behind the observance of *ridam*: peer pressure within the community and the Buddhist belief that the acts of this life will be rewarded or punished in the next. In some areas, this tradition has broken down over recent years with the introduction of a forest department permit system that provides legal access to locals and strangers alike. Village leaders are anxious to reinstate *ridam*⁷⁰.

Christianity: Christianity was founded in the first century AD by the followers of Jesus Christ, believed by Christians to be the Son of God. The teachings of Jesus are collected in four Gospels and further amplification is given by a series of letters written by the disciple Paul, being collected together into what is known as the New Testament. A number of other sacred writings have been rediscovered more recently including the so-called Dead Sea Scrolls and Nag Hamadi gospels. There are many different branches of Christianity, with the largest being Roman Catholic, Eastern Orthodox and Protestant.

Christianity teaches that all creation is a loving act of God and that humanity may not destroy God's creations without the risk of destroying itself. In the Bible, the book Ecclesiastes states in chapter 3, verse 19: "For the fate of the sons of men and the fate of beasts is the same; as one dies, so dies the other. They all have the same breath, and man has no advantage over the beasts; for all is vanity." However, Christ also stated that humans were more important than animals, for example in the Gospel of Luke (12:7): "...you are worth more than many sparrows". Many Christians today believe that a misinterpretation of this and similar statements has led to a devaluing of the importance of nature and our responsibility towards its protection.

There have been several important statements made by Christian leaders relating to the environment, which have attempted to revise or re-examine their theology and in turn their practice as a result of the ecological crisis⁷¹. For example the Orthodox Church published an important document, *Orthodoxy and the Ecological Crisis*, in 1990. A major statement was made in 1991 by Pope John-Paul II, from which the following is extracted: "The concepts of an ordered universe and a common heritage both point to the necessity of a *more internationally coordinated approach to the management of the earth's goods*. In many cases the effects of ecological problems transcend the borders of individual States; hence their solution cannot be found solely on the national level. Recently there have been some promising steps towards such international action, yet the existing mechanisms and bodies are clearly not adequate for the development of a comprehensive plan of action. Political obstacles, forms of exaggerated nationalism and economic interests—to mention only a few factors—impede international cooperation and long-term effective action"⁷².

Christian groups have emerged with a particular focus on conservation. For instance the A Rocha organisation, currently active in 15 countries, focuses on both practical conservation work and policy and educational initiatives. Development of field study centres has been a particular initiative in several national groups. Some groups work specifically on issues relating to protected areas. For example, A Rocha Czeck is carrying out monitoring at Orlické Záhori, a 904 hectare marshland and grassland site in Eastern Bohemia that is habitat for endangered corncrake (*Crex crex*) populations; in South Africa the Western Cape A Rocha Interest Group has carried out a monthly meet for ringing birds in Cape Town's Rondevlei Nature Reserve ; and in Ghana the group is establishing the Mognore-Murugu Community Natural Resources Management Project, working with two of the twenty-seven communities living around the Mole National Park in northern Ghana⁷³.



School children observing the flora and fauna at the Rondevlei Nature Reserve Education Centre, Cape Town, South Africa

© WWF-Canon / Sandra Mbanefo Obiagio

Daoism: Daoism was traditionally believed to have been founded by the sage Lao Tzu in the 6th century BC, who is also identified as the author of the main text, the *Dao De Ching*⁷⁴ (although modern scholars believe this was finally compiled into a book some years later). Daoism stresses the importance of harmonious interaction with the environment, symbolised by a balance between the two opposing forces of Yin and Yang⁷⁵. Unlike many faiths, this dualism is not presented as a struggle between good and evil, in that both aspects are necessary for the balance. Over time Daoism also developed a more magical aspect, illustrated by the *I Ching*, a book of prophecy⁷⁶, and interest in immortality.

The emphasis of Daoism is on tending “our inner landscape”. For the Daoist the body must be tended in order to achieve the unity of humans and the cosmos⁷⁷. However, verses in the *Dao De Ching* stress the importance of maintaining a balance with nature, as do other Daoist classics such as the *Bao Pu Zi* (written in the fourth century AD), which highlights the need for a deep understanding of nature and careful treatment of natural processes⁷⁸. The philosopher Chuang Tzu, one of the most famous interpreters of Daoist thought, specifically teaches against the concept that all nature must be useful and stresses its existence value, for instance in the poem “The Useless Tree”⁷⁹. He is also critical of the anthropomorphic attitude which assumes that the good of animals and other living things can be judged by human criteria⁸⁰. There are many different emphases within Daoist traditions, including a modern, heavily western-influenced interpretation that lays great stress on ecology and balanced living⁸¹.

Hinduism: The word *Hindu* comes from the river Indus, although the *Sanatana Dharma* (or perennial faith, commonly known as Hinduism) certainly predates the term. There is no single book that all Hindus agree as authoritative but rather many traditions and texts and as many beliefs and practices; however, the six *darshanas* or schools of ‘orthodox’ Hinduism are all based on the four Vedas. In most schools of thought, the earth is revered as “mother earth” and known by many different names (e.g. Bhu, Bhumi, Prithvi). Hinduism is commonly referred to as the world’s oldest surviving faith. Excavations reveal the existence of an evolved culture dating to around 3000 BC. Among the finds is a three-faced prototype of Lord Shiva seated in yogic posture, representations of the *Shiva Linga*, and a horned goddess associated with the pipal tree.

References to trees can be found in the epic and poetic texts. Partly as a result, India has a long history of forest protection, from the edicts of *Asoka*, to the work of various Rajas and the modern Chipko movement, where women have prevented forest destruction by surrounding trees with their bodies⁸². Almost every temple in South India dedicated to the gods Shiva or Vishnu, or to a manifestation of the goddess, has a *sthal vriksha*, a sacred tree. Tree planting is a significant component of certain sacred texts, with trees sometimes compared to children. A passage from the *Matsya Puranam* describes how the goddess Parvati planted and cared for a sapling of the Asoka tree. The sages asked her what point there was in rearing trees like sons. Parvati replied: “One who digs a well where there is little water lives in heaven for as many years as there are drops of water in it. One large reservoir of water is worth ten wells. One son is like ten reservoirs and one tree is equal to ten sons. This is my standard and I will protect the universe to safeguard it”. The *Varaha Purana* says that one who plants five mango trees does not go to hell, and the *Vishnu Dharmottara* (3.297.13) claims that one who plants a tree will never fall into hell. The *Matsya Purana* also describes a “festival of trees” involving tree planting. Cutting trees was condemned by almost all the *dharma shastras*. Kautilya’s *Arthashastra* (ca. fourth century BC) prescribes varying levels of fines for those who destroy trees, groves, and forests⁸³.

Rivers are also an integral part of Hindu religious practice. The Ganges River which flows through northern India is referred to as the matted locks of Lord Shiva’s hair, giving sustenance to the hundreds of millions that live along its banks. Particular stretches of the Ganges are regarded as sacred and subject to sacrifices, such as floating blossoms or candles as in Haridwar. The damming of India’s two most sacred rivers, the Ganges and particularly the Narmada, has generated huge protests in part because of the loss of many sacred sites⁸⁴.



Right: In Nepal, Hinduism and Buddhism coexist and both revere sacred trees, as this one near the central temple in Kathmandu. Left: Hindu temples on the Ganges River, in Varanasi, India

Sue Stolton (left); © WWF-Canon / Michèle Depraz (right)

In addition to trees and rivers, a number of “sacred species” exist. For instance: the Tendu tree (*Diospyros melanoxylon*) is revered by the Gonds of Gadchiroli district in Maharashtra; the sandalwood tree is used in many rituals; the Rudraksh tree is made into beads used for meditation and as symbols of Lord Shiva; elephants are representations of the elephant-headed god, Ganesha; and monkeys are representations of Hanuman, from the *Ramayana* epic. Some species may be important because of their ritual significance⁸⁵. Ritual and devotional activities that protect the natural environment abound in the Hindu tradition⁸⁶.

The protection of groves and gardens, as well as pilgrimage to sacred and pure places, is recommended by some Hindu communities and mandated by others. The *Puranas* and epics mention specific places as holy and charged with power. Many Hindu texts say that if one lives or dies in the holy precincts of a sacred place, one is automatically granted supreme liberation. There are lists of such cities and villages; for instance Varanasi. Many lists are regional, but some are pan-Indian and span the subcontinent, creating networks of sacred spaces and consolidating the various Hindu communities.

Hindu mythology prescribes certain rituals for different deities (*Vratas*) that require the use of specific plant species. A compilation by the Karnataka Forest Department describes 19 *vratas* and more than 100 plant species required for these⁸⁷. Landscapes or patches of landscapes are also sometimes revered, usually because of an association with a specific deity.

Jainism: Often regarded as an offshoot of Hinduism, the sacred books of the Jain faith record the teachings of Mahavira (599-527 BC), the last of 24 great masters or Tirthankaras. Five vows, which inspired and influenced Mahatma Gandhi, dictate the daily life of Jains: non-violence (*ahimsa*), truthfulness (*satya*), not stealing (*asteya*), sexual restraint (*brahmacharya*), and non-possession (*aparigraha*). Jains adhere to these in order to minimise harm to all life-forms and teachings stress sympathy and compassion with all beings. The monks and nuns strive to leave little or no imprint on the broader ecological system, to the point that they would not for instance, engage in tree planting, although forest reserves have been established on property surrounding Jain temple sites⁸⁸.

One who neglects or disregards the existence of earth, air, fire, water and vegetation disregards his own existence which is entwined with them. Mahavira’s statement reinforces the Jain precept that humans and nature are interconnected and that we must respect and honour all living beings to maintain true balance and harmony on earth. For over two thousand years, Jain communities have been living examples of peaceful environmentalists, but have also recently decided that it is time to take a more vocal and active stance on the protection of nature.

In 1983 the first international Jain conference was held in London and as a result the Institute of Jainology (IOJ) was set up as an active body to coordinate activities in education and environmental awareness. In 1990 the Jain Declaration on Nature was written and presented to HRH Prince Philip and since then the IOJ has been facilitating environmental projects. In 1992 it was instrumental in hosting the first Jain Environment Day organised by the Oshwal Yuvak Sangh in the UK. To mark the occasion, an eight acre nature reserve was declared at the Oshwal Centre in Hertfordshire.

A new chapter in IOJ’s environmental activities began in 1993 with the launch of the Ahimsa Environment Award for “good Jain practices” by Jain businesses and communities in the UK. The awards are given to those who adopt sound Jain ethics in their workplace or communities and applicants were judged by representatives from WWF, the Body Shop, and the National Council for Voluntary Organisations. The principles reflect the holistic nature of Jain philosophy. Jain ecological philosophy is effectively tantamount to Ahimsa and its practical application results in individuals and communities concerned with their levels of consumption and the natural environment within which they live. The cosmology of the Jains fully recognises the natural phenomenon of mutual dependence, which in turn is the foundation of modern day ecology.

Parasaropagraho jivanan is an ancient Jain sutra, which roughly translates as ‘all life is bound together by mutual support and interdependence’ – a statement which finds echo in the thinking of modern ecologists.

These philosophical principles are starting to be applied in practice. In 1997 for example, plans were put into practice to reforest the hills around Palitana in India, the largest Jain pilgrimage site in the world. Palitana is also one of Gujarat’s most popular tourist destinations, with the Shatrunjaya hilltops and hundreds of temples. Therefore plans are also being drawn up to promote good environmental practices at Palitana, to demonstrate further the intrinsic links between the Jain faith and nature protection and rehabilitation.



Temples of Shatrunjaya, Gujarat, India.

Shatrunjaya, meaning ‘The Place of Victory’, is considered the most holy of the Jain sacred mountains because nearly all of the Tirthankaras are believed to have obtained nirvana while meditating atop the mountain.

Courtesy of SacredSites.com

Judaism: The Jewish faith is believed to have been founded by Abraham through a covenant with God around 2000 BC. Its laws draw on the *Torah*, the first five books of the Bible, and are further interpreted in the *Talmud*. In common with the other two main monotheistic faiths (Christianity and Islam), Judaism is ambiguous over the importance of nature. While it gives nature importance, and for instance, one of the most commonly-cited passages of the Torah with respect to nature (Deuteronomy 20:19-20) forbids the destruction of fruit trees, it also implies that nature is provided for humans to use.

According to Vogel (1999) the choice of Mt Sinai, a bare and desolate desert, for God to make his covenant with the Jewish people is precisely to demonstrate the ultimate importance of the Jewish people’s relationship to God as critical to their survival rather than their relationship to nature. This is seen as a definite break with past pantheistic faiths. The Torah also sometimes depicts nature as an evil force, as shown by the plagues (most of which are linked to nature) and the great flood. As a result, four key ideas are central to the Jewish faith’s relationship to nature: protecting the natural world is not the highest imperative; human life is more important than non-human life; nature is to be used and enjoyed as well as preserved; and nature can threaten humans just as humans can threaten nature⁸⁹.

However, as in the case of Christianity, modern reinterpretations of scripture are putting greater emphasis on conservation concerns. The Tree of Life is one of Judaism’s most powerful images, symbolising the interconnected nature of Creation, the Torah and the Divine. And planting trees has been a widely observed Jewish practice, particularly more recently and the Torah orders the creation of green belts around cities (Numbers 35:4).

In addition, in spite of a monotheistic ban against ancient pagan beliefs, trees still remain a subject of worship in Israel today, as manifested by the daily tying of rags on branches of sacred trees. A study to survey this custom in northern Israel suggests there are 17 reasons for the tradition, including breaking an oath, marking a blessed tree, marking the road to a blessed tree, asking for permission to pick fruit, setting out rags for needy people, to use a rag as a visiting card, and to pacify the tree’s spirits⁹⁰. Several Jewish customs also appear to stem from older faiths; for instance making offerings to a tree’s deities/spirits to ensure a good yield, to commemorate a death and to pacify a tree’s spirit while picking fruits. The acacia tree in particular holds a special place among the Hebrews as it was considered a sacred wood which was often referred to in holy texts. Moses was ordered to make the tabernacle, the Ark of the Covenant and table for the shewbread from the acacia⁹¹.

Islam: Islam arose in the 7th century AD by the Prophet Muhammad, who wrote down the revealed teaching of Allah in the *Qu'ran*, which remains the key sacred writings of the faith. Muslims belong to two main branches, Sunni and Shi'ite and there is also a linked Sufi sect which follows a more mystical path to Islam.

In Islamic texts, it is stated that humans have been granted stewardship over nature (but that nature belongs to God). We are therefore, entrusted as *khalifa*, or trustee of God, with looking after the Earth and all its elements. The *Qu'ran* states: "There is not an animal (that lives) on the Earth, or a being that flies on its wings, but (forms part of) communities like you (Sura 13 Aya 15). The prophet Muhammad is quoted as saying: "There is a reward in doing good to every living thing"⁹².

A number of key ecological issues are highlighted in the Islamic tradition⁹³. Water is to be protected as the ultimate source of life and according to Islamic law water sources such as rivers and lakes, should have an inviolable zone around them (a buffer) to prevent damage. Authorities have the right and obligation to prevent violation of these zones⁹⁴. Planting trees is regarded as good practice and an acceptable substitute for alms (itself one of the five basic pillars of the faith), whilst cutting down trees without strong and legitimate reasons is considered as destroying Allah's creation. Kindness to animals is encouraged and it is forbidden to kill animals for mere play. Birds are singled out in particular as their singing praises to Allah; one tradition suggests that if a bird is killed for amusement, it will ask Allah to extract justice from the killer on the Day of Judgment and a story about the Prophet returning pigeon nestlings to their nest is used to show concern for nature. Muhammad also forbade Muslims to kill the hoopoe, a particularly favoured bird⁹⁵. Both air and the earth are regarded as the property of Allah, although the Prophet Muhammad stated that if someone is able to return barren land to productivity, then that land becomes rightfully theirs (*Ihya'al-mawat*), a ruling with important implications for property rights. Contaminating the air is an encroachment on nature, and a threat to the life of mankind and all other living things.

Of particular importance is the role of Islam in encouraging the use of *Himas*, a form of rangeland management that actually predates the prophet but under Muslim law became more widely used and also more communal in approach. *Himas* were originally developed by settled communities as a way of preserving pasture from nomadic tribes and are one of the earliest forms of protected areas in the world. Traditionally they have employed many sound land-use policies including sustainable use of natural resources, management by social sanctions and equitable sharing of benefits. The Prophet Muhammad abolished private *himas* belonging to powerful individuals and established *himas* for the "common welfare", including rangelands, forests, woods, watersheds and wildlife. Around both Mecca and Medina, two of the holiest Islamic sites, the prophet Muhammad declared a zone of protection where no tree shall be cut or animal killed⁹⁶. Government is based primarily on users' rights and the need for sustainable management, with users being given responsibility for proper management⁹⁷.

Many countries of the Middle East officially discontinued the use of *Himas* about fifty years ago, however some remnants of their impact often remains. For example in Saudi Arabia the areas that have best withstood human pressures tend to be the traditional *himas* and plans to develop a comprehensive protected areas system builds on this ancient tradition. The new protected areas for example follow the old *himas* tradition of clustering several different classes of protected areas together⁹⁸.

Shinto: Shinto is the faith of Japan and has been heavily affected by Buddhism. Shinto combines a deep awareness of natural forces with a loyalty to the reigning dynasty of emperors, who are believed to be descendents of the Sun goddess, Amaterasu Omikami. The life-giving power is called Musubi (divine power of growth) and is present in all nature. There are many other deities but no formal hierarchy as they form a single divine realm centred on Amaterasu Omikami. The faith has no philosophical literature, doctrine or fixed system of ethics, but has very strong links to the natural world. Ceremonies appeal to the *kami*, forces of nature existing in mountains, springs, trees etc.

The ancient Japanese believed that all things of the world had their own spirituality, because they were born from the same divine couple, and that therefore the relationship between the natural environment and people is that of blood kin, like the bond between brother and sister⁹⁹. This faith gives great value to space and time and sacred shrines are thus demarcated from the secular world. Moreover, a close relationship between humans, deities, and nature is recognized resulting in a respect for the environment. Purification, which is a central element in Shinto faith, is seen as a counter-act to pollution¹⁰⁰.

Sacred groves are important within Shinto, including both cultivated and natural areas, and are the shrines of the *kama* deities. They are often the only remaining semi-natural vegetation in urban areas.

Sikhism: Sikhism was founded by the prophet Nanak, who lived between 1469 and around 1539. Sikhs believe in one God and equality of all humans and their principle sacred writings are contained in the *Guru Granth Sahb*. Sikhs should always have long hair, a comb, a sword, short trousers and a steel bracelet; their main centre of population and political stronghold is in the Punjab in western India.

Guru Nanak said “Within the Universe, Earth was created to be a shrine”. All nature is sacred according to the Sikh faith providing the world’s inhabitants with a place to grow spiritually. Many of the Gurus, the Sikh spiritual leaders, have stated their love for nature in all its forms. Sikhs teach that humans create their surroundings as a reflection of their inner state and that the increasing barrenness of the Earth reflects a spiritual emptiness in humans. Sikhs cultivate an awareness of and respect for the dignity of all life, human or otherwise. As with so many sacred places that begin with a mountain, forest, or other natural feature, Amritsar, the most sacred place for the Sikh faith began its life as a humble lake surrounded by tranquil forest. The serenity of the place invited the Buddha into its green haven and then Guru Nanak, who lived and meditated by the Amritsar lake. After Guru Nanak’s passing the site was developed by his disciples and following Gurus and in time became one of the most beautiful religious sites in the world – the Golden Temple at Amritsar.

Like many other faiths, Sikhism is now taking a stand on nature conservation beginning with awareness raising within their own communities and greening of their *Gurudwaras* (spiritual centres). Sikhism follows a three hundred year cycle, the most recent of which, “The Cycle of the Sword” finished in 1999. The name of the current cycle due to end in 2299, was chosen as the “Cycle of Creation” and this changed emphasis has already led to an increase in environmental practices by Sikhs. In response Sikh temples in India and in other parts of the world with significant Sikh communities, have increased their awareness of environmental needs and have intensified their activities to help meet these needs.

Within the folds of Sikhism mastery over nature is not the challenge but rather mastery over the self. Practising Sikhs are thus encouraged to study the sacred texts themselves in order to cultivate respect for the divinity both within themselves and within others. Without this respect, without social justice and human rights, the environmental crisis cannot be tackled.

The Khalsa Environment Project based in New Delhi is one concrete example of Sikhs coming together in the name of the environment¹⁰¹. With the help of the Alliance of Religions and Conservation (ARC), the Khalsa Environment Project joined forces with the Sikh Gurudwara Management Committee in Delhi to make Gurudwaras more environmentally friendly. Some of the activities under this project include tree planting, creating nurseries, raising environmental awareness amongst children, discouraging use of environmentally unfriendly products such as plastic bags, and recycling.

In November 2000 the Sikh community were congratulated by WWF International for having committed to launch an important climate change initiative as a *Sacred Gift for a Living Planet*¹⁰². Pioneering the way to sustainable living in Delhi, the Sikh community kitchens, known as Langars, are currently reducing their fossil fuel consumption by 10 to 15 per cent by using solar power and more fuel-efficient cooking methods.

All over India, Langars feed millions of people, regardless of their faith, every day as part of the Sikh practice of *Sewa* (selfless service). Recently the Sarab Sanjha Khalsa 3rd Centenary Environment Trust was set up to reinforce the fundamental values of the Khalsa and link them practically to *Sewa* in the form of service to the environment.

Zoroastrianism: Zoroastrianism was founded by the prophet Zoroaster (also known as Zarathustra), who was born in the seventh century BC in what is now Azerbaijan. The faith focuses on the cosmic struggle between a supreme god and an evil spirit. Islam arrived in Azerbaijan with Arab invaders in the seventh century AD, gradually supplanting Zoroastrianism and Azerbaijani pagan cults. In the seventh and eighth centuries, many Zoroastrians fled Muslim persecution and moved to India, where they became known as Parsis. Until Soviet Bolsheviks ended the practice, Zoroastrian pilgrims from India and Iran travelled to Azerbaijan to worship at sacred sites, including the Surakhany Temple on the Apsheron Peninsula near Baku. Zoroastrianism sees the physical world as a natural matrix of Seven Creations (sacred earth, sky, water, plants, animals, humanity and fire) in which life and growth are interdependent. The practice of regarding the earth as sacred implies that life is also sacred. Currently the catastrophic decline in vultures in India, caused by chemical poisoning, is causing concern to Parsi communities because the birds are essential to the tradition of disposing of the dead in “Towers of Silence”¹⁰³.

To summarise, whilst the various faiths have very different interpretations of sacredness in general, and very different worldviews, none reject the concept of the importance of nature, and emphasis on environmental and conservation issues appears to be increasing. Many demonstrate these links very directly through recognition of sacred sites or other forms of sacred nature¹⁰⁴. Others, whilst rejecting some of these concepts, in effect reach a similar form of land management through teaching of good stewardship, as in the case of the Islamic *himas* system.

4. The importance of sacred nature to conservation

As we have seen, different faiths, and traditions within a single faith, react differently to the sacred values in nature, some regarding this as a reason to preserve life while others believing that sacred creatures can still be hunted, albeit usually with attendant respect and ritual. Virtually all have a stake in maintaining spiritually important species in the long-term and many already have effective forms of community conservation in place, or are likely to be open to the concept of conservation. In some cases, where sacred species rely on a whole ecosystem (such as large herbivores or predators) then interest in a particular species can have knock-on effects in helping preserve an entire habitat. Mobile species are also important because they are unlikely to be restricted to a particular site and can help carry a wider, landscape or seascape scale conservation message. Sacred aspects of nature can be particularly important in helping to maintain community spirit and sustainable management in times of disruption and stress. For example, the fact that crocodiles are sacred to many people in West Africa means that their conservation is often facilitated. Crocodile ponds are permitted to remain quite close to communities, as is the case in parts of Mali, despite the potential risks to young children¹⁰⁵.



Pond in Mali, strictly protected by local people to preserve sacred crocodiles

Grazia Borrini-Feyerabend

5. Key issues relating to faiths and nature

The brief survey above has summarised some of the key relationships between faiths, nature and areas of protected land and water. Along with the many very real differences between and even within faiths, there are also some general trends and issues that affect virtually all faiths and cultures; a few of these are summarised below.

5a) Concepts continue to evolve in most faiths

For all their appearance of constancy, the large majority of faiths change constantly and often quite quickly, in relation to the interpretation of spiritual teachings and, to an even greater extent, how these are translated into social, economic and environmental policy. Faiths and their advocates are influenced by the secular world, changing emphasis and sometimes also interpretation in response to changes in the wider world. The way in which some of the mainstream faiths are responding to increased environmental awareness is one manifestation of this evolution. On a simpler level, new sacred natural sites are continually recognised, either because the perception of a place changes or because members of a faith group move. The attitude of faiths to nature, in all its aspects, will evolve over time; at least in part these changes will be influenced by the way in which conservation and faith groups interact.

5b) There is a growing awareness of conservation issues within faiths

At the moment, one of the fastest changing concepts, particularly within many of the mainstream faiths, is about our relationship and responsibilities towards the natural world. For some faiths that have in the past deliberately distanced themselves from the perceived idolatry of “sacred nature”, this change includes a conscious realignment to recognise humans’ place within nature rather than distinct from the natural world. For faiths that have always accepted the importance of the sacred in nature, there is in many cases recognition of the need to extend this philosophical recognition into practical conservation action. In some cases, it involves looking back to practices or beliefs of the past that now have new relevance, such as the *himas* system for protecting land under Islam.

5c) Faiths can interact with protected areas in a wide variety of ways

Much of the emphasis of this report is on the significance and management of sacred natural sites, because this is an issue of immediate relevance to many protected area managers, but these issues are only one part of a larger continuum of interaction. The majority of the world’s populations belong to two monotheistic faiths that specifically reject many of the concepts embodied in sacred natural sites (although as our later survey shows this rejection is neither total nor unambiguous). Whilst much of the most immediate links between the protected areas community and various faith groups will be through specific sites, the wider issues of how faiths relate to conservation is in the long term almost certainly more important.



Left: Official and unofficial shrines in protected areas are found throughout the world, as in this memorial to a young forester in Triglav National Park, Slovenia

Right: This shrine is in Satoyama Aichi-Seto 'Kaisho Forest'. 'Satoyama' means secondary forests, managed sustainably.

Nigel Dudley (left); © WWF-Canon / WWF-Japan/Mima Junkichi (right)

Mainstream faiths relate to protected areas in many ways. They often own, partly own or influence extremely large areas of land. Some faiths are already taking active steps to manage a proportion of this for biodiversity, either in their own protected areas or through other forms of sustainable management.

Faiths also own huge assets and have the option to help or hinder socially relevant issues by the way in which they invest their capital: for example, the International Interfaith Investment Group aims to persuade investors in mainstream faith groups to harness their funds to socially and environmentally relevant investments.

Followers of faiths come from all sectors of society, from presidents to paupers and from industrialists to conservationists. Faiths can, if they choose, act as a common meeting ground and perhaps also as brokers in debates about the way that we interact with the natural world. Faith leaders have in many cases been reluctant to interfere too directly in political or economic questions, knowing full well that the secular world can bite back quickly if religion is seen as “interfering” beyond its mandate, but at the same time they know that statements from mainstream faith groups carry weight far beyond the individuals who attend services and devotions. Strong statements of support in favour of protecting a proportion of the world’s lands and seas to maintain the rest of creation would pay dividends in helping to promote initiatives such as the Convention on Biological Diversity’s *Programme of Work on Protected Areas*.

5d) A key interaction is through sacred natural sites, many of which are now at risk

On a day to day basis, the link between faiths and protection still often comes through sites that have particular values to faith groups and parallel values to wild plants and animals. The growing awareness of environmental issues amongst the mainstream faiths is unfortunately matched by increasing threats to many sacred natural sites, which face twin pressures. From the outside, development pressures, legal or illegal, threaten the integrity or the very existence of many sacred groves, ponds, rivers or landscapes, through unsustainable resource use, pollution or more subtle cultural pressures such as those imposed by visitation. From the inside, many cultures that have sustained sacred natural sites, in some cases for hundreds or thousands of years, are themselves changing rapidly. Old traditions are dying away or being rejected; sometimes this rejection is very temporary but once lost such cultural determinants as sacred sites are very hard to replace.

5e) The traditional cultures that they embody are also at risk

The disappearance of sacred natural sites accompanies and in some cases is caused by the disappearance of the associated cultures. Many sacred sites are currently linked to societies that are themselves in transition. Are we managing for values that will soon disappear? In general, belief systems are resilient, many surviving over several millennia. While faiths certainly do disappear, and we are probably in a period in which many smaller belief systems may vanish with the cultures that supported them, in general the presumption should be towards permanence. Belief systems are complex and often not even openly admitted to, so the overly-hasty assumption that something has “lost” sacred values may be missing the point. As many indigenous peoples struggle to retain their community identities in a rapidly changing world, such sites are likely to increase rather than decrease in value. And in addition, a place that has once had high spiritual importance often retains something of this value in the minds of people who come much later, even if they do not share or even know the original faith system.

5f) Even ancient sites of former faiths often retain some spiritual values

Many relics of traditional and effectively extinct belief systems survive in, for example, Central America and Europe, preserved by local people over centuries. (Indeed it is perhaps significant that in many parts of Europe local communities feel readier to use the remains of recently abandoned churches for building materials than to rob ancient stone circles or tumuli.) The practical aspects are that sacred sites may include those that have in the past had significant spiritual importance. Faiths have proven extremely adaptable in maintaining their core beliefs while changing, slowly and often painfully, to accommodate changing world views in terms of scientific knowledge, political philosophy and social values. When a modern Hindu reads the Bhagavad-Gita, he or she will probably be interpreting it in a very different way than would have been the case a thousand years ago, or perhaps even twenty or thirty years ago. An understanding of both the permanence and the mutability of faiths is thus essential in planning long-term management options for natural sacred sites.

5g) Faiths often intermingle in natural sites and elsewhere

A larger question may relate to how all the various belief systems fit together and coexist. Many of the ideas we are discussing here with respect to increasing the links between faiths and habitat protection are reliant, at least implicitly, on the cooperation between people with different opinions and belief systems. In fact, tolerance of other spiritual practices is probably the rule rather than the exception, despite the dire warnings about the dangers of “false beliefs” that appear in many of the world’s religious writings. Most faiths, even those with apparently the strongest proselytising approach, have proven adept at co-existing in practice. The intermingling of Buddhist, Hindu and Daoist faiths, along with many other traditional belief systems, has continued throughout Asia for centuries and virtually all combinations now exist, usually in mutual respect¹⁰⁶. Islam has in general proven remarkably tolerant of other particularly monotheistic faiths¹⁰⁷. Christians and Muslims worshipped together in the Near East, often in the same space, for over a thousand years¹⁰⁸. More surprisingly, mainstream faiths have also frequently and tacitly allowed the continuation of earlier belief systems in parallel with dominant faiths and have been adept at incorporating them within accepted doctrines. The Christian Church throughout Europe co-existed for centuries with earlier beliefs, for example by teaching that ghosts were the images of souls in purgatory¹⁰⁹. The oldest yew trees (*Taxus baccata*) growing in British churchyards predate the arrival of Christianity and churches were sometimes established on sacred sites associated with the traditions of the druids¹¹⁰.

In general, one faith is expected to respect another, including its sacred sites, and failure to do so attracts strong negative reactions, such as the outcries that greeted the Taliban’s destruction of giant Buddhist statues in Afghanistan¹¹¹. The most intense internecine religious battles have seldom been *between* but *within* religions. Extremism is a constant possibility – and as is all too obvious one that is currently on the rise within several faiths¹¹² – but should not be over-estimated. Throughout Europe, different faiths now frequently share places of worship and there have been a number of important gestures of conciliation such as Pope John Paul II’s visits to Muslim countries such as Azerbaijan. Joint statements about issues of mutual concern by different faiths are far from uncommon, including those in relation to the environment, starting with the *Assisi Declaration* developed in cooperation with WWF twenty years ago¹¹³. Toleration of different concepts of sacred, which is virtually essential if sacred sites are to be managed within protected areas, is therefore well established and there are numerous precedents that can be quoted.

Part 3: What are protected areas and why do we need them?

The ex-army helicopter that transports visitors up from Petropavlovsk in the far east of Russia will fly for more than an hour over forests, cliffs and some of the region's ninety active volcanoes without touching more than a fraction of Kamchatka, an area larger than the UK but with scarcely 300,000 human inhabitants. Conversely in suburban Singapore, just 75 hectares of the island's original tropical rainforest remains on the slopes of a steep hill, but the Bukit Timah reserve still contains an important wildlife species. And in rural Wales, traditional sheep farming continues to take place across the heather-covered uplands of the Snowdonia National Park, whilst leaving space for native wildlife such as rare birds of prey. Although these three are dramatically different in terms of size, remoteness and approaches to management, they are all united by the fact that they have been deliberately designated as "protected areas", created with an aim of protecting natural habitats, species and where appropriate associated cultural values.

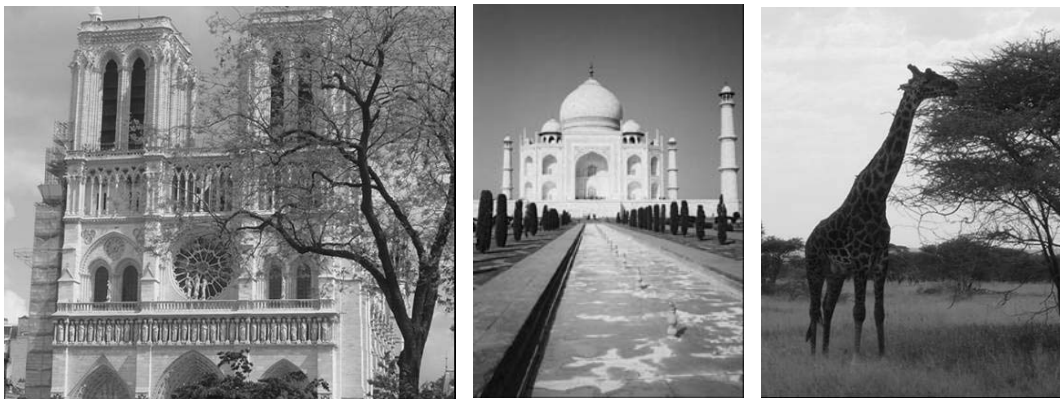


The earth is currently facing an "extinction crisis" of unprecedented scale and speed. Although species naturally change over time, with new species emerging and old ones gradually evolving or slipping into extinction, human actions have caused a rapid acceleration in the loss of species, ecosystems and genetic diversity. Many of these extinctions are to species that have never even been described by science – thought to be the large majority of the world's diversity and including particularly invertebrates, lower plants and aquatic species – but many larger and better known plants and animals are also declining at alarming levels. The Convention on Biological Diversity – the United Nations body charged with protection of the earth's natural abundance of wild species and genetic richness – estimates that the current extinction rate is 100-200 times higher than the naturally expected level, with the greatest losses on islands and in freshwaters¹¹⁴. The United Nations Environment Programme also identifies forest species as being particularly at risk¹¹⁵. The Millennium Ecosystem Assessment, a body established after the World Summit on Sustainable Development in 2002, is even more pessimistic and believes that extinction rates may be up to a thousand times expected levels. Drawing on the IUCN Red Data List, which charts threats to species around the world, it estimates that 12 per cent of bird species and 23 per cent of mammals are threatened with extinction. Just as significant, studies suggest that almost *all* species are currently declining in either range and/or population size¹¹⁶.

We have already mentioned some of the practical and ethical challenges posed by being responsible for such losses. At a philosophical and cultural level, the key challenge is to stimulate a shift in perception about our own role as being a *part* of nature rather than something wholly separate from the natural world. Whilst a few societies still retain this understanding, many do not. Implicit in the recognition of our integral place in the ecology of the planet is the associated responsibility for not destroying the ecological balance through our own actions. Slowing and halting the decline in natural habitats and biodiversity is one critical part of this responsibility, which requires a suite of actions at all levels of society and in both natural and cultural landscapes. Of these, the single most important tool currently available is the creation of official and unofficial protected areas that can provide sanctuary for wild nature.

Protected areas

Protected areas such as national parks and nature reserves are the cornerstones of almost all national and international conservation strategies. They act as refuges for species and ecological processes that cannot survive in intensely managed landscapes and seascapes. They also provide space for natural evolution and future ecological restoration, for example by maintaining species until management outside parks is modified to allow their existence in the wider landscape or seascape. Although protected areas are today often created primarily to protect biodiversity, people also draw many practical benefits, for example from the genetic potential of wild species, the environmental services of natural ecosystems, the recreational opportunities provided by wilderness areas and the sanctuary that such areas can provide to traditional and vulnerable societies, including many indigenous peoples. There are less tangible values at stake too. Biological diversity is increasingly recognised as an important part of a nation's unique character or value, comparable with valuable cultural sites, including those with significance to faiths. Although recognition has generally taken longer to achieve, flagship protected areas like Yosemite in California or the Masai Mara in Kenya have the same resonance in a nation's consciousness as, say, the Taj Mahal, Notre Dame cathedral or the paintings of Renaissance Italy.



People are gradually realising that unique natural sites have the same cultural importance as unique buildings or artworks.

Notre Dame Cathedral, Paris, Taj Mahal, India and giraffe in Serengeti National Park, Tanzania
Nigel Dudley and Sue Stolton

Areas of natural land and water have been set aside and protected for centuries and, as we will see, many of these special places have links with particular faiths. Others were set aside as hunting reserves, as for instance the famous Białowieża primeval forest, now straddling the border between Poland and Belarus¹¹⁷. Early sites were protected in response to practical problems caused by forest loss or soil erosion, as in the case of Switzerland¹¹⁸, and also to protect valuable wild plant and animal species. Traditionally managed areas may also have very high biological richness and the importance of such community conserved areas is being increasingly recognised¹¹⁹. However, the modern concept of a protected area, set aside to preserve wildlife for its own sake, emerged primarily in the twentieth century. Most protected areas were designated in the latter years of the century and therefore the science and art of protected area management is still in fairly early stages of development.

IUCN The World Conservation Union defines a protected area as: *An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means*¹²⁰. In other words, they are set up primarily for the protection of biodiversity but may also have a range of other important social, cultural and economic valuesⁱⁱ. Protected areas exist under literally dozens of different names, with common ones including *national parks*, *nature reserves* and *wilderness areas*. They also exhibit a wide variety of different management regimes, ranging from strictly “no-go” areas that are effectively kept free of any

ⁱⁱ It should be noted that this is a best compromise definition. Some indigenous peoples, for instance, think that it distinguishes too sharply between biodiversity and culture

human presence, to large landscapes or seascapes where biodiversity protection takes place alongside traditional management and frequently also permanent human communities. To provide some structure, IUCN has agreed a set of six management categories for protected areas, based on management objectives¹²¹. Like all artificial definitions the categories are imprecise and the boundaries between them sometimes blurred, but they provide a succinct overview of the multiplicity of protected area types. The six are outlined below.

- **Category Ia: *managed mainly for science or wilderness protection*** – area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.
- **Category Ib: *managed mainly for wilderness protection*** – large area of unmodified or slightly modified land and/or sea, retaining its natural characteristics and influence, without permanent or significant habitation, which is protected and managed to preserve its natural condition.
- **Category II: *managed mainly for ecosystem protection and recreation*** – natural area of land and/or sea designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.
- **Category III: *managed mainly for conservation of specific natural features*** – area containing specific natural or natural/cultural feature(s) of outstanding or unique value because of their inherent rarity, representativeness or aesthetic qualities or cultural significance.
- **Category IV: *managed mainly for conservation through management intervention*** – area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats to meet the requirements of specific species.
- **Category V: *managed mainly for landscape/seascape conservation or recreation*** – area of land, with coast or sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the area's protection, maintenance and evolution.
- **Category VI: *managed mainly for the sustainable use of natural resources*** – area containing predominantly unmodified natural systems, managed to ensure long-term protection and maintenance of biological diversity, while also providing a sustainable flow of natural products and services to meet community needs.



Protected areas have many different management regimes. Kaziranga National Park in India is totally protected with no human habitation while Brecon Beacons National Park in Wales is a cultural landscape with thousands of permanent residents.

Nigel Dudley

In addition, there are also a large number of areas of land and water that are quite effectively “protected” without being part of any official protected area, including in this context many sites that have been set aside from development and exploitation through traditional and customary laws developed because of

their sacred value. Other sites are set aside under the instruction of religious authorities for non-sacred reasons, such as protecting water supplies, but also maintain important biodiversity. Such sites provide a hidden second network of sites where the habitats and species are often very carefully protected. In some cultures these unofficial reserves can be more effective tools for biodiversity conservation than those areas identified and designated by the government. The long-term survival of some, but by no means all, of these sacred sites might be enhanced by being brought into recognised protected area networks. The guidelines and case studies in this report will, we hope, help those involved to make informed choices about when it makes sense to link a site protected because of its spiritual and cultural values with a national protected areas network. At present, many protected areas are owned and managed by national governments, but this is far from inevitable, and a number of different governance types are recognised:

Government-managed protected areas	Federal or national ministry or agency in charge
	Local / municipal ministry or agency in charge
	Government-delegated management (e.g. to an NGO)
Co-managed protected areas	Transboundary management
	Collaborative management (various forms of pluralist influence)
	Joint management (pluralist management board)
Community-conserved areas	Declared and run by indigenous peoples
	Declared and run by local communities
Private protected areas	Declared and run by individual land-owner
	Declared and run by non-profit organisation (e.g. NGO, university or cooperative)
	Declared and run by for-profit organisation (e.g. individual or corporate landowners)

Table 4: Different governance types in protected areas

When these are combined with the six IUCN categories, they create a matrix of different possibilities for the ways in which protected areas can be managed or governed.

Classification of protected areas by IUCN category and governance type											
Governance type	A. Protected areas managed by the government			B. Co-managed protected areas			C. Private protected areas			D. Community conserved areas	
IUCN category (management objective)	Federal or national ministry or agency in charge	Local / municipal ministry or agency in charge	Government-delegated management (e.g. to an NGO)	Transboundary management	Collaborative management (various forms of pluralist influence)	Joint management (pluralist management board)	Declared and run by individual landowner	...by non-profit organizations (e.g. NGOs, universities, co-operatives)	... by for profit organizations (e.g. individual or corporate land -owners)	Declared and run by indigenous peoples	Declared and run by local communities
I: Strict nature reserve or wilderness area											
II: Ecosystem conservation and protection											
III: Natural monument											
IV: Conservation through active management											
V: Landscape / seascape conservation & recreation											
VI: Sustainable use of natural resources											

Table 5: The interaction between management objectives and governance types in protected areas

The continuing need for new protected areas

By the time of the last global survey in 2003, over 100,000 designated protected areas existed in virtually every country of the world, along with an uncounted number of smaller reserves and refuges¹²². The vast majority are terrestrial, and protected areas now cover over a tenth of the world's land surface. There are also around 1300 marine protected areas, mainly in coastal regions, and coverage in marine areas is increasing rapidly although is still less than one per cent. Setting aside a tenth of the planet's land surface for the protection of natural biological diversity represents an extraordinary global recognition of the importance of wild nature. However, these statistics give a false impression of the strength of the world's protected area network. Many existing protected areas are remote, inaccessible or on land that is of little economic value – ice caps, deserts and mountains – and not in the places with the highest levels of biodiversity. There are notable gaps still remaining in terms of habitats and ecosystems that have not been protected¹²³; for instance the southern Pacific islands and the Cameroon Highlands in Central Africa are two examples of a number of regions that had one per cent or less of their forests protected according to research carried out in 2001¹²⁴. More generally, both freshwater and marine systems are poorly protected with for instance less than one per cent of lake systems in protected areas. A recent study found 140 ecoregions where natural ecosystems were being converted at least ten times more quickly than they were being protected¹²⁵. Furthermore, a worryingly large number of protected areas exist in name only, or are only poorly managed so that the values they are supposed to be protecting can continue to disappear¹²⁶. Isolated protected areas are also at risk even if they remain intact, unless they are extremely large, and species within them continue to decline¹²⁷.

The United Nations' response

In response to the continuing extinction crisis, in February 2004 the 188 Parties (nations and the European Union) that are signatories to the Convention on Biological Diversity (CBD) made a hitherto unique commitment to expanding the world's protected area network. The overall objective of the resulting *Programme of Work on Protected Areas* is to establish and maintain, "comprehensive, effectively managed and ecologically representative systems of protected areas" that collectively will significantly reduce the rate of loss of global biodiversity. The aim is to achieve this objective on land by 2010 and in marine areas by 2012¹²⁸. The *Programme of Work* contains over 90 specific, time-limited actions for governments. These lay stress on both the biological and socio-cultural importance of protected areas and recognise the importance of involving local communities in their selection and designation.

A stronger system of protected areas: The term *ecologically representative* protected area system is key here: it refers to the need for protected areas to represent, or sample, the full variety of biodiversity of different biological realms (freshwater, marine and terrestrial) and biological scales (species and ecosystems)¹²⁹. It implies that protected areas are not located randomly, or in areas where it is politically most expedient, but in places where they will conserve the most biodiversity and their location planned so that all biodiversity is included in areas large enough to ensure survival over time. The methodology of planning and locating protected areas in the "best" places for biodiversity has increased rapidly and ranges from expert workshop-driven approaches¹³⁰ through to data-driven procedures¹³¹, sometimes linked to specialised software tools. The commitment to ecological representation is in philosophical terms recognition that humans have an obligation to leave all other species with enough of their natural habitat for populations to be able to survive in the long term. Although there are pragmatic reasons for protecting biodiversity, the core of this commitment rests in ethical choices, made by the signatory nations of the CBD.

However, it will be obvious that in a crowded world with many competing needs, protected areas cannot and in most cases should not take precedence over all other demands on the land or water. In the past protected areas were often established from the top down, often by colonial authorities, sometimes resulting in the expulsion of people from their lands¹³². The CBD has rightly insisted in prior informed consent in establishing new protected areas. Locating protected areas therefore often depends on a complex process of negotiation, trade-offs and agreements, particularly with local communities and indigenous peoples who, if things are handled badly, end up paying most of the costs for protection that

may produce few direct benefits for themselves. It means making choices about the location, size and management objectives of protected areas that take into account other needs within the landscape or seascape. The art of protected area design is as much about balancing biodiversity and human needs, and finding the points of overlap, as it is about the strict science of assessment and planning.

Arguably what has often been lacking in conventional conservation approaches is the regard and respect for *all* the values of an area of land or sea – including both tangible and intangible values. While cultural values are sometimes considered when creating protected areas, spiritual and religious values are seldom taken into account by conservationists, yet an understanding of these issues is often critical to successful management. A new phase of awareness building amongst the conservation community is required to correct this shortfall.

Three important social movements come together here: a reinvigorated interest in nature amongst many faith groups, a drive to consolidate protected areas as a key step in protecting the planet's biological diversity and a realisation that the challenges of environmental protection values and human wellbeing must be addressed in concert. In practice, the type of management used to preserve sacred values is often virtually the same as the management needed to preserve biodiversity. Faiths and conservationists therefore often have common cause in their approaches to land and water management. The remainder of this report explores what this might imply in practice.

Sacred Gifts

A Gift to the Earth is a conservation action by a government, a company, an organisation, or an individual which is both a demonstration of environmental leadership and a globally significant contribution to the protection of the living world.

Building on the success of these Gifts since 1996, WWF and the Alliance of Religions and Conservation (ARC) joined forces to develop and recognise significant new conservation actions by the world's faiths. These are called 'Sacred Gifts for a Living Planet'.

The Gift is symbolic, but it celebrates a concrete conservation action. It allows WWF to recognise publicly an important conservation achievement, which can also serve as an example to others, helping encourage similar actions elsewhere. Using this mechanism, WWF draws worldwide attention to the conservation achievement, engaging the international media, funding agencies and other organisations. To date, over a hundred Gifts to the Earth have been recognised, including more than 60 major commitments by governments throughout the world.

In November 2000, representatives of the world's mainstream faiths and conservationists made a 'Journey to Kathmandu' to celebrate conservation achievements and commitments from different faiths around the world. Twenty-six Sacred Gifts were celebrated; several of these have already developed into large and lasting commitments. The faiths are embraced by billions of people around the globe and in many cases faiths and conservation organisations share similar goals. This represents a wide range of opportunities to work in close collaboration. In partnership with ARC, the Sacred Gifts initiative represents a further development of WWF's relationship with the world's mainstream religions initiated in Assisi, Italy in 1986. The faiths are already committed and actively engaged with conservation projects. The challenge to religious communities now is to examine and further expand their environmental influence and actions, and to focus on conservation priorities.

A potential Sacred Gift will reflect an important, on-going conservation initiative and announce a significant new commitment. The Sacred Gift will:

- Address a recognised environmental need in ways that will support good environmental practice.
- Use the resources of a faith community to reach, affect and encourage response in as many people as possible.
- Have the potential to grow and spread in effectiveness beyond its initial introduction.
- Show a cohesiveness and continuity across diverse aspects of a faith's work.
- Be seen by participants as part of a wider process across the faith community.
- Address key areas in which the faiths have considerable environmental significance and in which most, if not all, faiths are active: land and assets; education; media; health; lifestyle; and advocacy.

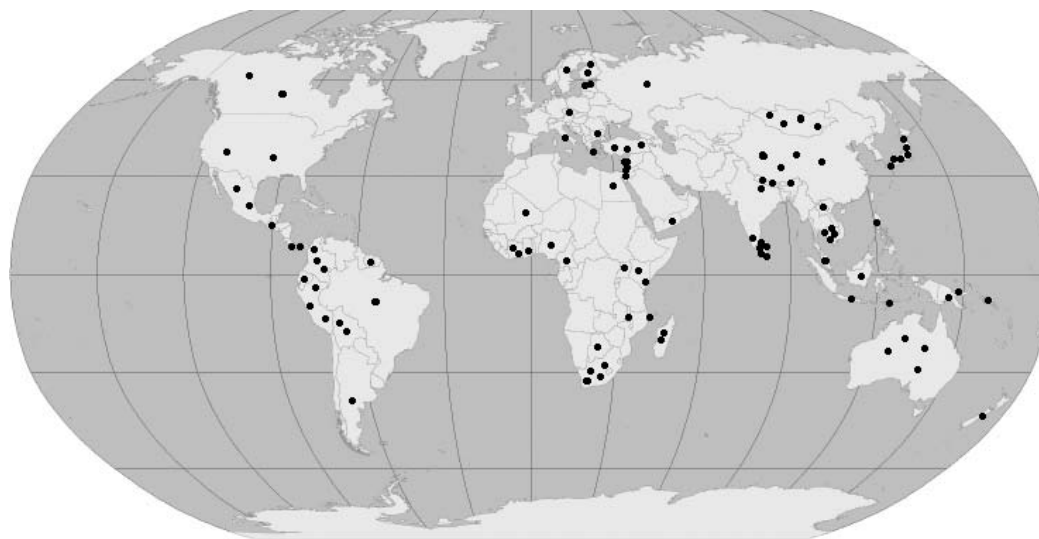
Adapted from WWF's website: www.panda.org

Part 4: A hundred sacred places within protected areas

The clearest links between faiths and protected areas arise when places important to a particular faith – because they are sacred, or on land traditionally owned or managed by the faith, fall inside protected areas. There has, as yet, been no overall survey of the links between faiths and nature, and a comprehensive study was beyond the resources of the current project. However, the following partial survey, of a hundred sites around the world, shows that links between faiths and protected areas are neither unusual nor limited by either geography or faith; rather the links are substantial and pervasive.

The very nature of sacred sites is that they evoke in people from many traditions, as well as today from no specific tradition at all, a sense of specialness and reverence. In the list we indicate the key faith initially identified with each site but in many cases, especially where we use the word ‘traditional’, this site could also be of importance to the major religion or religions in that region. For example, in Mexico (Wirikuta example), the Huichol pilgrimage route ends at a sacred mountain which is a mountain sacred also to Catholics – which many Huichol are – and is dedicated to St Francis. The plurality of sacred sites in terms of the different groups they appeal to can be seen in perhaps the most famous example of a sacred place – Jerusalem. This city and mount are sacred to Jews, Christians and Muslims. Likewise many ancient sites appeal deeply to people from a wide range of mainstream religions, as well as to people with no specific faith, and in some cases have even become the focal point of new religions.

Therefore in naming those for whom a site is most special, we are just opening the door to a potentially major sense of the sacred for many people from many traditions.



Map showing the distribution of sacred sites described in this surveyⁱⁱⁱ

For each site we list the name, size, date declared and IUCN category^{iv}, where these have been available, discuss the spiritual significance and add notes on other issues, including importance to biodiversity.

ⁱⁱⁱ The geographical designations given here do not imply the expression of any opinion whatsoever on the part of WWF concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries.

^{iv} The primary information source for this data is the World Database for Protected Areas, which can be found at: <http://sea.unep-wcmc.org/wdbpa/>

PACIFIC REGION

▪ Australia

Protected area name and other data: Kata Tjuta National Park (within which lies: Ayers Rock – or Uluru). Declared: 1977; size: 132,566 ha; IUCN category: II and World Heritage Site

Faith and significance to the faith: Traditional. The traditional owners of Uluru-Kata Tjuta are the Anangu Aboriginal people. The park, and in particular the Uluru monolith, is of religious significance to the Aborigines¹³³. In Aboriginal mythology Uluru is the Intelligent Snake from the universe, who emerged from a rainbow and slithered down to Earth; in other traditions it arose suddenly out of a larger sandhill¹³⁴. Uluru is depicted by Aborigines as a symbol of fertility. It is shaped like a horseshoe lying on its side, the open end to the left. The lower part of the "U" undulates and is filled with eggs. Thus the figure symbolises both male and female and is considered to be the father and mother of all forms of life. The Anangu believe that Mount Uluru is hollow, and that it contains an energy source that they call "Tjukurpa" the "dream time". They believe that the area around Ayers Rock is inhabited by dozens of ancestral beings whose activities are recorded at many separate sites¹³⁵.

Other issues: Since 1985, the Park has been returned to the Aborigines who now manage it. Visitors are asked not to climb on the rock, as this is sacrilegious, but some people continue to do so, which can result in 'worrying' time for the Aborigines.

▪ Australia

Protected area name and other data: Kakadu National Park. Declared: 1991; size 1,980,400 ha, IUCN category II and World Heritage Site

Faith and significance to the faith: Traditional. Kakadu National Park is the Northern Territory heartland of the Aboriginal "Dreamtime", the origin of the creator beings who sanctified the earth with its landforms and people, and who are now immortalised in some of the most prolific rock art on the whole continent. There are over 200 sacred sites within the lease area, including burial sites, creation sites, living areas and art sites¹³⁶.

Other issues: The Aboriginal people of Kakadu are known as Bininj in the north and Munggy in the south. Kakadu is an area of flat tropical savannah woodland characterised by low scrubby vegetation and large tracts of undifferentiated flat terrain. A complex of ecosystems, including tidal flats, floodplains, lowlands and plateaux, provide habitat for a wide range of rare or endemic species of plants and animals. The first protected areas established within the region currently occupied by Kakadu National Park were Woolwonga Aboriginal Reserve (50,500ha, 1964), and Alligator Rivers Wildlife Sanctuary and Protected Areas (ca. 200,000ha, 1972). Both areas were subsequently incorporated in Stage I of Kakadu National Park, which was proclaimed on 5 April 1979. Stage II of Kakadu was approved on 20 December 1985 and stage III on 12 June 1987¹³⁷. Kakadu has been the subject of considerable controversy because of plans to mine uranium in an area excised from the heart of the reserve, on land sacred to the local people¹³⁸.

▪ Australia

Protected area name and other data: Deen Maar. Declared: 1999; size: 453 ha; IUCN Category VI

Faith and significance to the faith: Traditional. This land is of special spiritual significance to local aboriginal people and has spiritual and visual connection with Deen Maar Island (Lady Julie Percy Island) where Bunjil, the Creator, left this world. Deen Maar was the site of deadly conflict between aboriginal people and squatters in 1842, commonly known as the Eumerella Wars. The battles raged for 10 years in the mid-1800s. The remains of aboriginal people involved in the conflict are at Deen Maar¹³⁹.

Other issues and sources: The site is an indigenous protected area. When purchased it was badly degraded and the indigenous owners see its restoration as a priority. Each winter the aboriginal elders

invite people from Melbourne to plant trees. This event provides opportunities for cultural exchange and leads to the planting of around 10,000 trees each year.

- **Australia**

Protected area name and other data: Gulaga National Park. Declared: 2001; size: 4673 ha; IUCN Category II

Faith and significance to the faith: Traditional – see case study in Part 6.

- **Bhutan**

Protected area name and other data: Jigme Dorji Wildlife Sanctuary. Declared: 1974; size: 790,495ha (made up of the Laya Wildlife Sanctuary (147,708ha), Gasa Wildlife Sanctuary (271,795ha) and Jigme Dorji Wildlife Sanctuary (370,992ha) ; IUCN Category IV

Faith and significance to the faith: Bön and Buddhist. Masang Khang is one of the many holy mountains in Bhutan, sacred to the Masang people who may have originated from southern Tibet.

Other issues: Bhutan's major rivers rise in the area and flow southwards, eventually draining into the Brahmaputra River south of the border with India. Forests, comprising 20-30 per cent of the sanctuary, are found in the upper catchments of the major river systems in the southern sector. The area is important for Himalayan wildlife, with Palaearctic and Indomalayan elements represented. Notable species include snow leopard (*Panthera uncia*), Himalayan musk deer (*Moschus chrysogaster*), Himalayan tahr (*Hemitragus jemlahicus*), takin (*Budorcas taxicolor*) and blue sheep (*Pseudois nayaur*)¹⁴⁰. The inhabitants of Laya differ significantly in their language and costume from other Bhutanese peoples, and practice the Bön religion¹⁴¹.



The vast cultural World Heritage site of Angkor in Cambodia contains important wildlife habitats along with the temples that it was set up to protect

Nigel Dudley

- **Cambodia**

Protected area name and other data: Angkor. Declared: 1992, size circa 40,000 ha; World Heritage Site

Faith and significance to the faith: Hinduism and Buddhism. Angkor is one of the most important archaeological sites in South-East Asia. It includes forested areas and the magnificent remains of the different capitals of the Khmer Empire, from the 9th to the 15th century. The temple Angkor Wat, was built by the King Suryavaram II in honour of the god Vishnu. Other temples at Angkor were built by the Khmer between 802 and 1220 AD¹⁴².

Other issues: Although primarily a cultural site, the area has extensive natural forests and an active conservation society, monitoring wildlife. Much of the site remains off limits because of mines laid by the Khmer Rouge¹⁴³. The options for increased nature tourism are being investigated¹⁴⁴.

- **Cambodia**

Protected area name and other data: Phnom Prich Wildlife Sanctuary. Declared: 1993; size: 222,500ha; IUCN Category III

Faith and significance to the faith: Traditional. A small area of forest within the wildlife sanctuary is considered a Spirit Forest; beliefs passed down through generations dictate that the area should be completely untouched¹⁴⁵.

Other issues: recent camera trapping has confirmed the presence of tigers in the reserve¹⁴⁶.

- **Cambodia**

Protected area name and other data: Phnom Nam Lyr Wildlife Sanctuary. Declared: 1993; size: 47,000ha. IUCN Category III

Faith and significance to the faith: Traditional. A sacred stone found at approximately 1300m within the protected area is of high spiritual significance¹⁴⁷.

Other issues: some parts of the park have been heavily impacted by illegal logging¹⁴⁸.

- **Cambodia**

Protected area name and other data: Phnom Kulen National Park. Declared: 1993; size: 34,000ha; IUCN Category II

Faith and significance to the faith: Traditional and Buddhist. A sacred spring and surrounding forests are said to be important for providing good fortune, romance, and protection from physical harm in times of war¹⁴⁹.

Other issues: a local businessman has put a road through the park and is charging foreign visitors entry fees. These funds are not being returned to management and facilities remain poor¹⁵⁰.

- **China**

Protected area name and other data: Xishuangbanna National Park. Declared: 1986 (added to the UNESCO Man and the Biosphere programme in 1993); size: 247,439ha; IUCN Category V and MAB

Faith and significance to the faith: Buddhism. The reserve is home to a number of minority groups, including Han (30 per cent) and Dai (30 per cent). Every village of the Dai contains its own sacred grove which is meant to protect the village¹⁵¹. A study calculated that in the prefecture of Xishuangbanna sacred groves protect up to 100,000 hectares (5 per cent of total surface area)¹⁵².

Other issues: Xishuangbanna comprises the largest and most comprehensive tropical forest in China and contains the highest levels of biodiversity in the country. There are 200 species of food plants, 100 oil plants, 20 species of aromatic oil plants, 300 species of medicinal plants and 30 species of 'living fossils'. Since the establishment of the reserve, elephant and gaur populations have increased. There are also 427 bird species, including the rufous-necked hornbill (*Aceros nipalensis*), green peacock (*Pavo muticus*), and crimson sunbird (*Aethopyga siparaja*). Amphibians total 38 species and reptiles 60 species, including python (*Python molurus*), fish salamander (*Ichthyophis glutinosus*), naked-eared flying dragon (*Draco blanfordi*), flying lizard (*D. maculatus*) and water monitor (*Varanus salvator*). Over 1,437 different species of insects are present¹⁵³. The Dai people in the Xishuangbanna region of Yunnan have a long history of managing sacred mountains, which includes strict prohibition of gathering, hunting, wood chopping and cultivation. This has contributed to ecosystem conservation by

maintaining otherwise threatened rainforest, specific conservation activities with over 250 medicinal or otherwise useful plants and buffering for state nature reserves¹⁵⁴.

▪ **China: Shandong Province**

Protected area name and other data: Mount Tai Shan Scenic Beauty and Historic Interest Zone. Declared: 1982 (listed in 1987 as a World Heritage Site); size: 25,000 ha; IUCN Category III and World Heritage Site

Faith and significance to the faith: Daoism and Buddhism. Mount Tai Shan is an important centre of religious activity for both Buddhism and Daoism. It is believed to have been the site of ritual observances for three thousand years¹⁵⁵. In 351 BC a monk named Lang set up the Lang and Divine Rock temples on the mountain. Several other important temples have been built since then, including the Jade Spring Temple, God's Treasure Temple and Pervading Light Temple (built in 420-489 AD). According to the doctrine of five elements, which dates back to the Spring and Autumn Period, the east signifies birth and spring. Because it stands at the eastern edge of the North China Plain, Tai Shan has therefore always been regarded as pre-eminent among China's five sacred mountains, which were first officially recognised during the reign of Emperor Wu Di of the Han Dynasty (206 BC - AD 220). For over 3,000 years, Chinese emperors have made pilgrimages to Tai Shan for sacrificial and other ceremonial purposes. Rock inscriptions, stone tablets and temples bear testimony to such visits. Renowned scholars, including Confucius whose home town, Qufu, is only 70km away, have composed poetry and prose and left their calligraphy on the mountain.



Stairway to Heaven, Pilgrims ascending sacred Mount Tai Shan

Courtesy of SacredSites.com

Other issues: There are 22 temples, 97 ruins, 819 stone tablets, and 1,018 cliffside and stone inscriptions. Mt Tai Shan is one of the birthplaces of the Chinese civilisation. By Neolithic times, 5,000-6,000 years ago, it had become a significant cultural centre with two cultures flourishing, the Dawenkou to the north and the Longshan to the south of the mountain¹⁵⁶. The area is also rich in biodiversity. There are 1037 species of higher plants including 11 that were first discovered in Tai Shan and some threatened species; 37 mammal species, 148 birds including several threatened species, 40 families of butterflies and moths (including 592 genera), 14 reptiles, six amphibians and a particularly rare fish species, the red-scaled fish¹⁵⁷.

▪ **China: Autonomous Region of Tibet**

Protected area name and other data: Parsa Wildlife Reserve (specifically Mt Kailash). Declared: 1984; size: 49,900 ha; IUCN Category II

Faith and significance to the faith: Buddhism, Bön, Jainism, Hinduism. Mount Kailash is an important place of pilgrimage for followers of many faiths and religions, including Buddhists, Bön practitioners, Jains and Hindus. Most pilgrims walk a holy 'kora' or circuit of the mountain, (a distance of 56 kilometres which ascends to over 5,700 metres above sea level) as a way of purging the body of sin. Those who complete 108 circuits apparently gain instant enlightenment¹⁵⁸.

▪ **China: Tibetan region of Sichuan**

Protected area name and other data: Tiebu Nature Reserve. Declared: 1966; size: 23,000 ha; IUCN Category V

Faith and significance to the faith: Buddhism. Within the Tiebu forest there is a 3832 metre peak called Da-Au, also the name of the mountain god. Da-Au is believed to have raised a sacred deer and no one in the area can hunt deer for fear that the mountain god will vent his anger in the form of hail, bad harvests and plagues on livestock¹⁵⁹.

Other issues: This is the last refuge of the Sichuan Spotted Deer.

- **India**

Protected area name and other data: Great Himalayan National Park. Declared: 1962; size: 75,400 ha; IUCN Category: II

Faith and significance to the faith: Hinduism: Places of religious importance in and around the park include the hot springs at Khirganga and Mantalai Rakti Sar (source of the Rakti Nal) and Hans Kund (source of Tirthan River).

The Devata or deity institutions are extremely influential. Attached to these Devata committees are sacred groves which are exclusively protected in name of the Devata. Over several hundreds of years, the villagers have made their own rules for these sacred groves which even today are honoured. The sacred groves of Shenshar Valley, Jiwanal, and Lapah village are some of the best examples of such local conservation efforts. To a villager, the sacred grove is a matter of great divine respect. An interesting story behind the origin of the Manali town goes like this. Vaivastava, the seventh incarnation of Manu once found a tiny fish in his bath. The fish asked to be looked after and promised to be of great service in return. Manu devotedly cared for the fish until the day it grew so huge that he had to release it into the sea. Before leaving, the fish, called Matsya, warned Manu of an impending deluge when the entire world would be submerged in water. When the flood came, Matsya, believed to be the first avtaar of Lord Vishnu, towed Vaivastava and seven sages with him to safety. As the water subsided, Manu's ark was found on a hillside and the place was named Manali after him. 'Devi' worship is also practised widely in the valley and trees are festooned with precious iron objects stuck into the bark as offerings to 'Devi', the goddess who can destroy all before her.

Other issues: The preservation of the forests, in a region where large-scale felling has taken place, was a major reason for establishing the protected area. The site has a near-complete complement of the large mammals known to occur in Himachal Pradesh, and is also rich in birds, being particularly important as a location for pheasants. The park supports the largest known population of Himalayan tahr (*Hemitragus jemlahicus*) in the state and is one of only two places in India where anything more than a remnant population of the western tragopan (*Tragopan melanocephalus*) is known to survive¹⁶⁰.

- **India**

Protected area name and other data: Periyar Tiger Reserve. Declared: sanctuary in 1950, national park in 1982; Size 77,700 ha (national park area 35,000 ha); IUCN Category IV for the whole sanctuary, II for the National Park

Faith and significance to the faith: Hinduism. See detailed case study in Part 6

- **Indonesia: Sulawesi:**

Protected area name and other data: Poboya-Palu Forest Park. Declared: 1995; size: 8,100ha (made up of Poboya Nature Reserve (1,000ha), Paneki Protection Forest (7,000ha) and 100ha of reforested land).

Faith and significance to the faith: Traditional. Parts of the Park are considered sacred and cannot be touched. Many of the indigenous people of the Forest Park use these areas of sacred forest for special ceremonies, such as to call for rain during a prolonged dry season. People believe their ancestors lived there high in the hills, before the communities settled in the valley. At one such location – Pomene on

the river Poboya – there are two ancient grave sites. Despite the sacred value of parts of the area, much of the remainder has been degraded¹⁶¹.

- **Indonesia: West Timor**

Protected area name and other data: Gunung Mutis Nature Reserve (*Cagar Alam Gunung Mutis*). Declared: 1983, size: 90,000 ha

Faith and significance to the faith: Traditional. For the Meto, the indigenous people of Gunung Mutis, the spiritual relationship with nature is of great significance to daily life. Nature is believed to be reflected in humans, and vice versa. Rituals are very much centred on the worship of ancestors. The Atoni believe in three divine forces. *Uis Neno*, *Uis Pah* and *Apinat Aklahat*, respectively heaven, the earth and the “ultimate force”. The way to all these forces is through the ancestors. For example not long ago people’s hair would symbolise the forest and the wealth of the forest. Large and curly hairstyles were common until Catholic and Protestant churches established in the villages, and banned this form of adherence to “traditional beliefs”. In Meto beliefs soil is considered the “source of life”. This means that agricultural crops are the embodiment of ancestors and ceremonies are held throughout different cultivation phases. The concept of *le’u* which means holy or sacred is a force that can be either dangerous or favourable. Anything can transform to *le’u* as a result of a ceremony¹⁶².

Other issues: Gunung Mutis reserve is a critical watershed for the island of Timor and has an important role in culture as well as economy of the fourteen villages and their 25,000 inhabitants located in and around the protected forest. There are two small villages within the protected forest – Nenas and Nuapin – and several other villages overlap with both the protection forest as well as the nature reserve. Gunung Mutis is still believed to provide habitat for most of the native Timorese mammals and its 217 bird species. The Meto people are believed to have occupied the lands around Gunung Mutis for more than 13,000 years as hunters and gatherers and to have begun domesticating livestock about 4,500 years ago¹⁶³.

- **Japan**

Protected area name and other data: The Sacred Forest of Kashima. Declared: 1956; size: 1500 ha

Faith and significance to the faith: Shinto. Kashima (Deer Island) in Lake Kitakata, near the mouth of southern Ishikawa's Daishoji River, is joined to the mainland only by a thin neck of land. At 30 meters high and 600 metres around, this gently rounded oval area of land is covered with a remnant of the original primeval forest that, like the sacred shrubbery of the nearby Shrine of Hachiman, remains comparatively well preserved.

Other issues and sources: This protected area is a rare relict of primeval forest in this part of Japan. It is composed mostly of broadleaved, temperate and evergreen forest. The canopy consists of the Tabu tree, with some mixture of bush cinnamon, Chinquapin, bush camellia and zelkova. There are a myriad of creepers, including lacquer vine and kizuta ivy. Growing on the trunks of the larger trees are epiphytes like the bean ivy, and rare fauna can also be found. Kashima Jingu has 800 species of trees and an exceptionally rich bird life; one grove is designated as a Natural Monument¹⁶⁴.

- **Japan**

Protected area name and other data: Chubu Sangaku National Park (Northern Japan Alps). Declared: 1934; size: 174,323ha (63,522ha special protected area); IUCN Category V

Faith and significance to the faith: Shinto. The mountain in the north of the park, Tateyama, was consecrated in 703 AD. It is one of several sacred mountains in Japan, including Nakuso San, Fuji San, Nantai San etc. An 8th century shrine is situated on the peak at Oyama. The Park is situated in north-central Honshu island in the Gifu, Nagano, Niigata and Toyama Prefectures. Its ownership is split as follows: 147,888ha state land, 12,870ha public land; 9010ha still in private ownership¹⁶⁵.

- **Japan**

Protected area name and other data: Sacred Site and pilgrimage route in the Kii Mt range. Declared: 2004; size: 495 ha; World Heritage Site, 2004

Faith and significance to the faith: Shinto and Buddhism. Three sacred sites – Yoshino and Omine, Kumano Sanzan, and Koyasan – are linked by pilgrimage routes to the ancient capital cities of Nara and Kyoto, reflecting the fusion of Shinto and Buddhism. The area, with its abundance of streams, rivers and waterfalls, is still part of the living culture of Japan and is much visited for ritual purposes and also hiking, with up to 15 million visitors annually.

Other issues: The sacred nature of the site has resulted in important ancient trees and groves being preserved, including: an ancient *Podocarpus nagi* at Kumano Hayatmam Taisha, planted according to legend in 1159; the Nchi primeval forest part of the Kumano complex, protected since ancient times as a sanctuary; giant trees of up to 500 years old around a cemetery in Koyasan; natural silver fir forests along a pilgrim route, protected since the 15th century; 108 ha of protected *Magnolia sieboldi*; and a group of ancient cedar trees said to be 3000 years old¹⁶⁶.

- **Japan**

Protected area name and other data: Itsukushima shrine. Declared: 1996, World Heritage Site

Faith and significance to the faith: Shinto and Buddhism The island of Itsukushima is situated in the Seto inland sea and has been a holy place of Shinto since the earliest times; during some periods it has been forbidden to set foot there. The first shrines were probably erected in the 6th century. The present shrine dates from the 13th century and the harmoniously arranged buildings reveal great artistic and technical skill¹⁶⁷. Unusually, the buildings are on the edge of the sea and the site is regarded as one of the finest Shinto temples in Japan; this proximity to salt water means that the fabric of the buildings needs to be renewed fairly frequently.

Other issues: Although listed under World Heritage as a cultural site, the natural features of the island are also protected. The upper slope of Mount Misen is designated as a National Park Special Protection Area and as a Special Wildlife Protection Area, and the whole island is zoned for protection¹⁶⁸.

- **Japan**

Protected area name and other data: Nikko National Park. Declared: 1934; size: 140,021ha; IUCN Category V

Faith and significance to the faith: Shinto, Buddhism. The Toshogu shrine was built in 1617 to commemorate Ieyasu Tokugawa, the founder of the Edo shogunate Government. This building and a complex of other temples and shrines, set amid sacred *Cryptomeria* groves, are some of the most important architectural structures in Japan. A Buddhist temple (Rinnoji), constructed 1,100 years ago, is the oldest structure at Nikko. The festivals for the Toshogu shrine are celebrated on 17 May and 17 October every year when 1,000 "armed warriors" dressed in the armour of the Edo period (17th century) walk in procession in Nikko. Pilgrimages are also made to the sacred shrine on the summit of Mt Nantai.

Other issues: The park consists of an area of volcanic mountains, the most important being Mt. Okushirane (2,577m), Mt. Nantai with the crater of an extinct volcano (2,484m), Mt Nasu and Mt Hiuchi. The area is largely a landscape of plateaus, rivers, waterfalls, lakes and dense forest. There are many hot springs as at Chuzenji, and 47 waterfalls¹⁶⁹.

- **Japan**

Protected area name and other data: Mount Hakku San National Park. Declared: 1991; size: 14,826ha; IUCN Category V, UNESCO Man and the Biosphere Reserve

Faith and significance to the faith: Shinto, Buddhism. Since 717 AD, when Buddhist Priest Taicho founded the Mt. Hakku San retreat, Mt. Hakku San has been known as a religious mountain with a small secluded shrine on the top. The three deities *Izanagi no mikoto*, *Izanami no mikoto*, and *Kukurihime no kami* are connected with Mt. Hakku San. *Kukuri* is the goddess who arbitrated between *Izanagi* and *Izanami* and is the dragon goddess of Hakku San.

Other issues: The Biosphere Reserve is made up of a National Park (created in 1962) and consists mainly of highlands forming the backbone of the Hokuriku district, dominated by Mount Hakku San (2,702 metres above sea level), a volcano with eight craters near its summit one of which, Senjaga Lake, is frozen all year round. The non-woodland steep alpine screen slopes and ‘snow slip’ lands are refuges for the unique ‘Altherbosa’ (communities with tall herbaceous plants, especially in denuded forest areas)¹⁷⁰.

▪ Lao PDR

Protected area name and other data: Corridor Nakai - Nam Theun and Phou Hin Poun. Declared: 2000; size: 77,170 ha, IUCN Category VI

Faith and significance to the faith: Traditional. Many villages in Phou Hin Poun maintain conservation forests where the spirit of the village ‘protector’ is believed to reside¹⁷¹.

Other issues: The area is comprised of a high limestone karst plateau. The area is described as scenically attractive and features sink holes, caves, disappearing streams and some very steep areas¹⁷². The area was at one time protected as a royal hunting reserve and is still reputed to be rich in wildlife. Unusual endemic fauna includes douc langur (*Pygathrix nemaeus*), imperial pheasant (*Lophura imperialis*), sooty babbler (*Stachyris herberti*) and others¹⁷³. The proposal to build a major dam nearby has proven highly controversial¹⁷⁴, including widespread opposition to the involvement of the World Bank and disagreement about whether the dam meets the criteria set out by the International Dams Commission¹⁷⁵.



Mount Kinabalu is a sacred mountain to some local communities but also now a major tourist destination and an important site for biodiversity conservation.

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▪ Malaysia: Sabah

Protected area name and other data: Kinabalu National Park. Declared: 1964; size: 75,370 ha; IUCN Category II

Faith and significance to the faith: Traditional. The Kadazan Dusun people who live on Mt Kinabalu believe the mountain to be sacred as it is the resting place for their ancestors’ spirits.

Other issues: With its peak at 4,101 metres, Mount Kinabalu is the highest mountain in South-East Asia. Mt. Kinabalu is believed to contain one of the richest and most diverse assemblages of plants in the world. A recent study found that Kinabalu flora contains as many as 5,000 – 6,000 species, comprising over 200 families and 1,000 genera¹⁷⁶. The park contains a high number of endemic flora. More than half (78 species) of the 135 species of *Ficus* occurring in Borneo can be found at the site¹⁷⁷.

- **Mongolia**

Protected area name and other data: Bogd Khan Mountain Strictly Protected Area. Declared: 1778 then re-established in 1978; size: 41,651 ha; IUCN Category Ib

Faith and significance to the faith: Buddhism – see case study in Part 6.

- **Mongolia**

Protected area name and other data: Dornod Mongol (also known as Eastern Mongolia Protected Area - contains Vangiin Tsagaan Uul). Declared: 1992; size: 573,000 ha; IUCN category Ib

Faith and significance to the faith: Buddhism. Vangiin Tsagaan Uul (White Mountain of Vangi) is a sacred Buddhist peak within the reserve¹⁷⁸.

Other issues: The reserve is one of the largest areas of intact grazing ecosystems on the planet, home to up to a million Mongolian gazelle (*Procapra gutturosa*)¹⁷⁹.

- **Mongolia**

Protected area name and other data: Khovsgol Lake (Dalai Ej). Declared: 1992; size: 838,070 ha; IUCN Category II.

Faith and significance to the faith: Buddhism. The Lake is protected as a National Park and is sacred to Mongolians who call it “Dalai Ej”, the “Mother Sea”¹⁸⁰. Performing specially-designed religious rituals for honouring the spirits of water and land is part of traditional conservation in Mongolia. The nomadic Mongolians have a long tradition of conserving nature through the honouring of water and land, chanting from religious texts, making offerings and praying in order to seek blessings on the place by the deities. The traditional religious ceremonies have been inherited from the ancient traditions of Mongolian Shamanism on deifying and respecting the Sky by identifying it with a father and the Earth with a mother. With the coming of Buddhism into Mongolia in the 16th century, the *sutras* (religious scriptures) for the rituals were created. These sutras were based on the profound belief of interdependence of the living and non-living worlds. The religious rituals follow established procedures, wherein the *sutras* are used for chanting to ask for blessings by the spirits, followed by offerings of food, and even of gold and silver.

Other issues: The “Blue Pearl”, Lake Hovsgol is a 100-mile long pristine alpine lake located in the north of Mongolia, close to the Siberian border in the Altai mountain region. The protected area comprises the southern limit of the Siberian taiga forest (mainly larch), as well as steppe grassland, mountain tundra and the lake itself. A five-year project is studying the interactions between permafrost melt, biodiversity loss and nomadic land use patterns. The project has cooperated with the Buddhist University and with Gandan Monastery in Ulaanbaatar to publish information describing the water deities, the procedures for worship, the necessary preparations, and the purpose and significance of the rituals. The Tibetan-script *sutra* to be used for chanting of religious ritual for the Water Deity is included to aid the monks in the local community conduct the ceremonies.

- **Mongolia**

Protected area name and other data: Terelj National Park (and Khentii Strictly Protected Area) Declared: 1995; size: 293,168 ha; IUCN Category II

Faith and significance to the faith: Buddhism. This area of mountains, known as God's hill, is one of the sites mooted as the burial place of Chinggis Khaan. Over 800 burial sites have been found in the region. The “Secret History of the Mongols” describes how Chinggis Khaan hid here as a young man and later returned to give praise to the mountain and give thanks for his successes.

Other issues: Much of the area remains relatively pristine although poaching is a problem¹⁸¹.

▪ Nepal

Protected area name and other data: Sagarmatha National Park. Declared: 1976; size: 114,800 ha; IUCN Category II, UNESCO World Heritage Site

Faith and significance to the faith: Buddhism. Sherpas in the Sagarmatha National Park of Nepal believe that goats, yaks, and sheep are under the special protection of Khumbu Yul Lha, the protector deity of the Khumbu region – god’s sacred mountain, Khumbila. There are several monasteries in the park¹⁸².

Other issues: Sagarmatha National Park is one of the most famous protected areas in the world, containing Mount Everest. Over 3000 people live in the park and tourism is a major source of income, although this has declined recently due to insurgency. The protected area also contains important wildlife species¹⁸³. There are 152 species of birds known, of which 36 are breeding species for which Nepal may hold internationally important populations¹⁸⁴.



Right: Tengboche monastery in the Himalayas. Sagarmatha (Mount Everest) National Park, Nepal

Left: Annapurna Conservation Area, Nepal

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▪ Nepal

Protected area name and other data: Annapurna conservation area, proposed protected area

Faith and significance to the faith: Hinduism and Buddhism. Gurungs have inhabited the Modi Valley for many centuries. Originating from Tibet, they have combined their Buddhist beliefs with Hinduism. They and their Magar neighbours to the west have developed many social and religious customs. For instance, Machhapuchhare is sacred to Gurungs and consequently is closed to mountaineering. The powerful spirit of Pujinim Barahar guards the approach to ‘Annapurna Sanctuary’ and customarily only males of certain castes could pass beyond the gorge of the Modi Khola. In the Phu Valley, north of the Annapurna range, the Bhotias of Naur and Phu villages continue to practise orthodox Tibetan Buddhism. Remnants of the Pre-Buddhist Bönpo religion persist in Naur.

Other issues: The Annapurna region contains a unique mix of natural and cultural values. About 40,000 people reside in the proposed conservation area, including several thousand Gurungs in the upper Modi Valley, Magars to the west and south-west and small numbers of various Hindu castes, such as Brahmin and Chhetri (farmers), Damai (tailors), Sarki (cobblers) and Kami (blacksmiths). There are also up to 60,000 visitors a year to this popular trekking centre in Nepal, although this has declined in the last few years due to political tensions. Over a hundred mammal species live in the area including the endangered snow leopard (*Panthera uncia*). 441 species of birds have been recorded¹⁸⁵.

▪ New Zealand

Protected area name and other data: Tongariro National Park. Declared: 1894 (listed as a World Heritage Site in 1990); size: 76,504 ha; IUCN Category II and World Heritage Site

Faith and significance to the faith: Traditional. Tongariro National Park was the first natural site to also be recognised for its spiritual importance to the Maori people. The sacred mountain of the Ngati Tuwharetoa is located in the park. It was the first site of its kind to be listed under revised cultural values by World Heritage in recognition of its extremely high importance to the Maori¹⁸⁶.

- **Philippines**

Protected area name and other data: Mount Apo Natural Park. Declared: 1996; size: 63,186ha; IUCN Category II

Faith and significance to the faith: Traditional. The peak of Mount Apo is sacred to the Bagobo, Manobo and other tribes that inhabit its foothills.

Other issues: Mount Apo is an area of immense ecological importance, situated on the island of Mindanao, in the South of the Philippines. It is the country's highest peak. The area includes one of the last remaining patches of virgin rain forest in the Philippines¹⁸⁷ and it is one of the last remaining strongholds of the endemic Philippines eagle *Pithecophaga jefferyi*.¹⁸⁸ Recently Mount Apo has been under stress as a result of encroachment¹⁸⁹.

- **Papua New Guinea**

Protected area name and other data: Hunstein Range Wildlife Management Areas. Declared: 1997; size: 220,000 ha; IUCN Category VI

Faith and significance to the faith: Traditional. The Hunstein Range was declared to protect the forests of the Bahinemo people in the face of logging and mining threats. A key incentive was the fear of disturbance of the millipede shaped forest spirit (or *masalai*) that inhabits the higher reaches of Mount Samsai. The rules of the Wildlife Management Areas (WMA) specifically forbid disturbance to this and other *masalai* areas within the WMA in support of local tradition. WMA rules also include traditional restrictions on hunting of older pigs, megapodes and cutting of swidden gardens.

Other issues: Hunstein Range WMA is the largest lowland rainforest protected area in Papua New Guinea. It includes lake systems that are part of the Sepik River wetlands, one of the largest and least polluted wetland systems in the Asia Pacific region. A healthy crocodile population is harvested under CITES exemptions granted to PNG¹⁹⁰.

- **Papua New Guinea**

Protected area name and other data: Madang Lagoon Wildlife Management Areas (Laugum, Sinub, Tab, Tabad). Declared: 2003; size: 1,085 ha; IUCN Category VI

Faith and significance to the faith: Traditional. These four Wildlife Management Areas protect areas of reefs in the Madang Lagoon on the north coast of PNG. Particular protection is afforded to areas recognised as the dwelling places of sea spirits (also known as *masalai*). Study of the coral and fish diversity of the lagoon indicates that *masalai* sites tend to be more diverse and have higher biomass than other areas of the lagoon¹⁹¹.

Other issues: Madang Lagoon is part of the Bismarck Solomon Seas Ecoregion which contains the richest coral and saltwater fish diversity in the planet. The area is wholly owned by customary communities.

- **Solomon Islands**

Protected area name and other data: Tetepare. Declared: 2002; size: 12,000 ha; IUCN Category V

Faith and significance to the faith: Traditional. From approximately 300 to 100 years ago the entire population of Tetepare left the island, possibly following the ravages of disease, headhunting or spiritual forces. Subsequent generations of the descendants of Tetepare have been fearful that permanent habitation of the island will bring harm from spirits or demons, which now reside there.

Other issues: With the exception of a small coconut plantation at its western extremity and a few small gardens, the vast majority of Tetepare's 11,880 ha of rainforest have been untouched by humans for at least the past century¹⁹².

- **Sri Lanka**

Protected area name and other data: Yala National Park. Declared: 1938; size: 28,905 ha; IUCN Category Ia

Faith and significance to the faith: Buddhism and Hinduism. In the era of the Ruhunu Kingdom, the summits of the hills in Yala National Park were the abode of Buddhist monks and it is believed that several monks reached the state of Nirvana at this place; hence the name Arahat Kanda (Kanda: hill; Arahat: an enlightened person having reached Nirvana)¹⁹³. The 35 km Buttala-Kataragama road used to be – and still is – one of the main pilgrimage routes to the important religious shrines of Kataragama. Most important of the shrines here is the Mahadevala – a temple for the six-faced, twelve-armed Hindu war god, Skanda – one of the four guardian Gods of Sri Lanka.

Other issues: Yala is renowned for the variety of its wildlife, largely characteristic of dry zone tropical thorn forest, and its fine coastline and associated coral reefs¹⁹⁴.

- **Sri Lanka**

Protected area name and other data: Peak Wilderness sanctuary (contains Sri Pada or Adam's Peak). Declared: 1940; size: 22,380 ha; IUCN Category IV

Faith and significance to the faith: Hinduism, Buddhism, Christianity and Islam – see case study in Part 6.

- **Sri Lanka**

Protected area name and other data: Kataragama Sanctuary. Declared: 1940; size: 838 ha; IUCN Category IV

Faith and significance to the faith: Buddhism, Hinduism, Christianity and Islam. Buddha is said to have visited Kataragama after a stop at Digavapi and meditated there to sanctify the place. Worship is made here to the deity Kataragama Deviyo who is in fact a combination of two spiritual gods Kadira Deva and Skanda Kumar. He is represented in human form in the front curtain of the shrine flanked by his two wives riding on a peacock, his *vahana*, or vehicle. According to legend, when Elara invaded Sri Lanka and began his reign at Anuradhapura, he had brought an Indian called Kadira and sent him to Rohana to spy on the Sinhala royals there. Kadira brought with him an Indian wife called Thevani and settled down in the village of Kataragama but then promptly took a second, local wife, called Valli. After the death of Elara he gave up his mission of spying and became a powerful man helping the local poor and he became known as a benefactor. After his death the Sinhalese erected a shrine, a simple building devoid of all decorations such as arches, statues of gods and idols, and paid him homage. Later, the Hindus worshipping at the shrine introduced Skanda Kumara, son of Shiva who is the god of war, as the reigning deity of the shrine¹⁹⁵.

- **Sri Lanka**

Protected area name and other data: Mihintale. Declared: 1938; Size: 1000 ha; IUCN Category IV

Faith and significance to the faith: Buddhism. It was at Mihintale that the apostle Mahinda met King Devanampiyatissa and officially introduced Buddhism to Sri Lanka. During the Poson season, thousands of devotees ascend the 1840 stone steps to pay their respects to Arahat Mahinda, whose relics are said to be enshrined in the Ambasthala stupa on the Mihintale hill¹⁹⁶.



Mihintale Buddha, Sri Lanka. Situated 12 kilometres east of the ruins of the great city of Anuradhapura, the sacred mountain of Mihintale is considered the location where Buddhism was first introduced to the island of Sri Lanka.

Courtesy of SacredSites.com

▪ Sri Lanka

Protected area name and other data: Sinharaja Forest Reserve. Declared: 1988; size: 11,331 ha; IUCN Category II and World Heritage Site

Faith and significance to the faith: Buddhism and Hinduism. The Sinharaja region has long featured in the legends and lore of the people of Sri Lanka. Its name literally means lion (sinha) king (raja). According to legend, the Sinhalese people of Sri Lanka were born from the union between a princess and a lion who lived in the forest.

Other issues: There are two villages within the south-west of the reserve, namely Warukandeniya and Kolonthotuwa and about 52 families live in the north-western sector. The total population is in excess of 5,000 people. Some land adjacent to the reserve is under private ownership, including small tea and rubber plantations. The reserve contains the last viable area of primary rainforest in Sri Lanka and is of immense conservation importance with high endemism; over 60 per cent of trees are endemic¹⁹⁷.

LATIN AMERICA AND THE CARIBBEAN

▪ Argentina

Protected area name and other data: Lanin National Park. Declared: 1937; size: 379,000 ha (Park: 194,600 ha. Reserve: 184,400 ha); IUCN Category II (National Park) and IV (Managed Reserve)

Faith and significance to the faith: Traditional. This is the land of the Mapuche Indians or the “Earth people” (Mapu means Earth and Che means people). The name “Lanin” in Mapuche means “dead rock”. It is famous for its monkey puzzle tree (*Araucaria araucana*) which is sacred to the Mapuche. Lanin contains a dormant volcano. Its legend, according to the Mapuche, relates to Pillán, the evil god, who also happens to be the god of nature. Because the Huanquimil tribe were over hunting deer, Pillán became enraged and sent them terrible storms and caused the volcano to erupt. The villagers, in a state of panic, consulted their sorcerer who, after going into a trance, informed them that they had to sacrifice Huilefün the youngest daughter of the village chief and throw her into the volcano’s crater. The young Quechuán was tasked with taking her up to the top of the volcano. No sooner had they reached the top than a condor caught her in its talons and hurled her into the crater. Clouds and snow covered the crater and then the volcano stopped its terrible eruption. It has been dormant ever since.

Other issues: The park is government owned and the reserve partly privately owned. The park consists of typical Andean-Patagonian forests, including monkey puzzle and southern beech (*Nothofagus* spp.)¹⁹⁸

▪ Bolivia

Protected area name and other data: Sajama National Park. Declared: 1942; size: 100,230 ha; IUCN Category II

Faith and significance to the faith: Traditional. Aymara Indians consider Sajama sacred and are active participants in the park's management¹⁹⁹

▪ **Bolivia**

Protected area name and other data: Kaa-lya del Gran Chaco. Declared: 1995; size: 1,954,875 ha; IUCN Category II

Faith and significance to the faith: Traditional. The Guaranis live in this area. For them, the 'Big Father', Ñande Ru, who stems from the Earth, is the giver of life.

Other issues: This is the largest protected area in South America administered by local communities. There are three communities: the Izoceño Guaraní, the Ayoreode and the Chiquitano. The vegetation is mainly dry forests with over 69 species of mammals, including jaguars, peccaries, guanacos (of which only 140 individuals remain in Bolivia), and the giant armadillo²⁰⁰.

▪ **Bolivia**

Protected area name and other data: Isiboro-sécure. Declared: 1965; size: 1,200,000 ha; IUCN Category: II

Faith and significance to the faith: Traditional. The park is the ancient refuge for the Yurakaré ethnic group.

▪ **Brazil**

Protected area name and other data: Tumucumaque. Declared: 1961: and 1968 (1961: forest reserve 1.7M ha, 1968: indigenous park, 2.7M ha); size: 3,870,000 ha

Faith and significance to the faith: Traditional. Tumucumaque means "The rock on top of the mountain which symbolises the fight between the spirits and the shamans".

Other issues: This is the largest national park in the tropical world, located near the border with French Guyana and Suriname and on the headwaters of the Oiapoque and Jari rivers. The park remains largely unsurveyed but contains populations of many threatened species, including the rare primate the black bearded saki (*Chiropotes satanus*)²⁰¹.

▪ **Colombia**

Protected area name and other data: Laguna de la Cocha. Declared: 2001; size: 39,000 ha; Ramsar site

Faith and significance to the faith: Traditional. The site has an important cultural value for the indigenous groups of the area, who consider it sacred, and use it for purification and fertility.

Other issues: Largely made up of a volcanic lake and the surrounding highland Andean peatlands and forest, the site supports a diverse range of associated flora and fauna. Mammals include the endangered tapir (*Tapirus pinchaque*), near-threatened Northern pudu (*Pudu mephistotels*) and the endangered spectacled bear (*Tremarctos ornatus*) and there are important endemic species of frailejon (*Espeletia cochensis* and *Espeletia schultesiana*), which are typical of this wetland type²⁰².



Laguna de la Cocha is a Ramsar site located in the Department of Nariño in Colombia, close to its capital city Pasto

© WWF-Canon / Denis Landenbergue

- **Colombia**

Protected area name and other data: Puracé National Park. Declared: 1977; size: 83,000 ha; IUCN Category II

Faith and significance to the faith: Traditional. Local people believe that the devil lives in the volcano of Puracé. In the lagoons “Mother Water” appears as a woman or a snake and is believed to protect the fish.

Other issues: The Park is where the rivers Rios Magdalena, Cauca and Caquetá, originate²⁰³. There is an active volcano.

- **Colombia**

Protected area name and other data: Sierra Nevada de Santa Marta. Declared: 1979; size: 2,115,800ha (contains also cloud forest and national park); Man and the Biosphere reserve

Faith and significance to the faith: Traditional. See case study in Part 6.

- **Costa Rica**

Protected area name and other data: Arenal. Declared: 1991; size: 12,010ha; IUCN Category II

Faith and significance to the faith: Traditional. The Arenal volcano, located in the rainforest, was sacred to pre-Columbians.

Other issues: Arenal is an active volcano and in consequence a major tourist attraction; the surrounding rainforest is also an important wildlife sanctuary. The constant lava and ash help to create a unique ecology²⁰⁴.

- **Ecuador**

Protected area name and other data: Cayapas Mataje (mangroves). Declared: 1995; Size: 51,300 ha; IUCN Category VI

Faith and significance to the faith: Traditional. A number of figures are part of the local mythology: “Animas” are guardians of natural resources but are believed to be bad spirits; “Tunda” protects the mangrove and has the power to convert itself into a human; the “Riviel” is a being from the water who travels between the estuaries, canals and the sea; the mermaid attracts sailors and takes them to the waters’ depths. All of these figures have survived new beliefs brought in by the Catholic faith and are still worshipped. A number of different rituals and feasts are celebrated around them²⁰⁵. Witch doctors use a number of local plants to treat anything from myopia to infertility.

Other issues: The site is said to have the world’s tallest mangroves. There are six species of mangroves, 68 fish, 22 reptiles, 145 birds and 53 mammals. The area has been affected by the construction of numerous shrimp pools and the establishment of crop plantations²⁰⁶.

- **Guatemala**

Protected area name and other data: Tikal. Declared: 1955; size: 55,005 ha; IUCN Category II. World Heritage site

Faith and significance to the faith: Traditional. Following the 1996 peace accords, the Guatemalan government issued a decree designating six Mayan ceremonial sites within Tikal, granting spiritual guides access to those sites and establishing guidelines for access and use that support indigenous rights whilst also protecting the park. According to Mayan spiritual leaders, 40 to 50 percent of the population practise some form of indigenous spiritual ritual, although perhaps only 10 percent do so openly in this predominantly Catholic country. The Maya have a belief system rooted in a reverence for nature. They believe in a supreme creator whose spirit is present in all living things. Nature takes care of them — providing them with the means to farm, hunt and stay healthy — and they have a

responsibility to care for nature in return. Mayan spirituality is expressed through rituals performed in natural settings and at ancient Mayan cities and temples such as Tikal.

Other issues: Whilst the park is predominantly known for its archaeology, it also contains large areas of forest and important wildlife habitats²⁰⁷. There are 54 species of mammals and 333 species of birds and the site includes many endangered species such as the ocellated turkey (*Agriocharis ocellata*) and Morelet's crocodile (*Crocodylus moreleti*). The protected areas contains the largest remaining expanse of tropical rainforest in the country²⁰⁸.

▪ Mexico

Protected area name and other data: Wirikuta reserve. Declared: 2001; size: 10,000 ha

Faith and significance to the faith: Traditional. The Huichol live in small communities scattered through the canyons and valleys of the western Sierra Madre in the states of Jalisco, Nayarit and Durango. Descended from the Aztecs, the Huichol believe that the Cerro Quemado (Burnt Hill) at Wirikuta is where their ancestors witnessed the birth of the sun. The first deer hunt also took place here. Out of the deer's footprint the Peyote, or sacred cactus, grew. For the Huichol, the Peyote cactus (*Lophophora williamsii*) is the most significant of the desert's native flora. It contains a number of alkaloids which produce a hallucinatory effect when they are consumed. The Huichol use the peyote as a means to communicate with their gods and ancestors. Each year a special group of Huichol makes a pilgrimage to Wirikuta, 500kms to the east in San Luis Potosí state, to eat the Peyote and make offerings to the gods. The area has been used for millennia as a setting for shamanistic rituals²⁰⁹.

Other issues: The Wirikuta reserve is the first 'sacred natural' site in Mexico. It is situated in the ecoregion of the Chihuahuan desert, one of the richest deserts in the world, with over three thousand plants, 120 reptiles, 250 birds and many mammal species. The protected area supports brown bear, royal eagle, relict forest and 42 species of cacti, 14 of which are found nowhere else in the world. WWF funded the development of a management plan for the site²¹⁰.

▪ Mexico

Protected area name and other data: Lagunas de Montebello. Declared: 1959; size: 6022 ha; IUCN Category II

Faith and significance to the faith: Traditional. The Lagunas de Montebello are important to the Tzotziles Indians and contain a Mayan temple.

Other issues: The park consists of 59 lagoons and lakes, made up of a chain of limestone sinkholes.

▪ Panama

Protected area name and other data: Kuna Park. Declared: 1983; Size: 60,000 ha

Faith and significance to the faith: Traditional. Kuna is an area of virgin rainforest of about 60,000 ha under the management of a society that has a spiritually-based respect for nature. For the Kuna people "Forests are sanctuaries where the spirits hang their clothes from the tops of the tallest trees. If they cut down the trees, the spirits will punish them²¹¹."

The forest contains the "world of spirit" and the "world of subsistence". The world of spirit surrounds and resides inside every material thing. It underlies the world of subsistence and gives it force. The Kuna respect "spirit sanctuaries" where these spirits dwell. The sanctuaries are usually in areas that could be good agricultural land that has not been cleared. If the sanctuaries are violated, the spirits rise up in rage and inflict harm on the community. According to legend, the Earth is the body of the Great Mother. The Great Father joined in a sexual union with the Great Mother and she gave birth to all plants, animals and humans. She is the source of all life, and it is her body which continuously regenerates the planet with life and helps the Kuna stay in equilibrium. The Great Mother instructed certain beings of their duties. Medicinal plants were informed of their role in curing illnesses, certain

animals told they were to be used by Kuna for food, and hardwood trees instructed for use as building materials. The Great Mother drinks the sap produced by the trees to give her strength. Trees are Kuna life; they protect them, provide medicine for illnesses, and fruit for the animals. If the land were exploited, the trees would die and production would diminish. Kuna are taught early in life to take care of Mother Earth. They treat every element of nature as if it were human, with respect, flattery, and compromise.

Other issues: The area is currently under pressure because of growing population. The park is important also because it represents an early attempt by indigenous people to set up protected areas in part to protect their traditional lands²¹².

▪ Peru

Protected area name and other data: Historic Sanctuary of Machu Picchu. Declared: 1981; size: 32,592ha; IUCN Category VI and World Heritage Site

Faith and significance to the faith: Traditional. The spectacled bear (*Tremarctos ornatus*) in Machu Picchu is thought to serve as a messenger between the spirits of the high elevations and those of the jungle.

Other issues: The spectacled bear is also a threatened species for which the protected area forms an important refuge²¹³. Machu Picchu is one of the most famous archaeological sites in the world, located in old-growth forest and with significant biodiversity. Visitor numbers are high although most people keep to the areas with Inca remains²¹⁴.



Left: Ruins of Machu Picchu, Peru

Right: spectacled bear

Courtesy of
SacredSites.com (left); ©
WWF-Canon / Kevin
Schafer (right)

▪ Peru

Protected area name and other data: Vilcanota, proposed protected area

Faith and significance to the faith: Traditional. This is the first Natural Sacred Site in Peru, a model which recognises and promotes Kechua values and principles in the conservation and sustainable use of biodiversity. Each year, in the continuation of a pre-hispanic event, more than 50,000 people from the Peruvian Andes make a pilgrimage to the sacred mountain to participate in the festival of Q'olloyriti. The traditional peoples such as the Q'eros who live in this area, demonstrate the vitality and continuity of the ancient Kechua culture. For them, mountains or Apus are sacred beings that represent the most important expression of human aspirations.

Other issues: The Vilcanota region includes the second most important glacier system in Peru. The mountain range is dominated by the snow-capped peak of Ausangate (6,372m), which is considered the main Apu of the Southern Andes. This site includes great ecological diversity due to the different Andean altitudinal and climatic zones. It is recognised as a biodiversity hotspot, a critical ecosystem and one of the main centres of genetic diversity of important Andean crops. The Vilcanota Spiritual Park is being implemented as a Community Conservation Area²¹⁵.

- **Peru**

Protected area name and other data: Lake Titicaca. Declared: 1997; size: 460,000 ha; Ramsar site

Faith and significance to the faith: Traditional. In Inca mythology, the children of the Sun emerged from the depths of Lake Titicaca to found their empire. It is also said to be the origin of life, from where everything began. Indigenous communities like the Aymara people living in the Titicaca Basin still practise ancient methods of agriculture on step terraces that predate Inca times.

Other issues: Titicaca is the world's highest navigable freshwater lake; it contains several protected areas and some human settlements. Several endemic species of fish are found in the lake, which is also extremely important for migratory and Andean water birds, including three species of flamingo²¹⁶.

- **Suriname**

Protected area name and other data: Central Suriname Nature Reserve. Declared: 1998; size: 1.6 million ha; IUCN Category II and World Heritage site

Faith and significance to the faith: Traditional. The caves of Werehpai (a dozen in total) are covered in carvings of large crude figures. Legend says that Werehpai, a member of the Akijo tribe, lived in the caves for thousands of years. This tribe was thought to have been much more advanced than other tribes; they could paint, draw and weave but used their advanced knowledge for evil rather than good. One day, during an attack on another tribe, they kidnapped two young children, brother and sister, and gave them to Werehpai to raise as her own. When the children had grown, the girl was taken from Werehpai and subjected to the terrible Akijo ritual. First, she was tattooed all over her body. Then she was eaten alive, being kept conscious for two days while her body parts were removed. Werehpai had come to love the children and knew that a similar fate was in store for the boy, Aturai, so she helped him to escape and find his way home. Aturai exacted his revenge by returning with an army and using skills he had learned from the Akijo to destroy them in a battle in the caves. Today, the people of Kwamalasemutu believe that the sacred carvings in the cave commemorate that battle²¹⁷.

Other issues: There are almost 6000 vascular plant, 400 bird species and many mammals present in the park²¹⁸.

AFRICA AND MADAGASCAR

- **Botswana**

Protected area name and other data: Tsodilo Hills. Declared: 2001; Size 9,000 ha; World Heritage Site

Faith and significance to the faith: Traditional. Known as the “Louvre of the Desert”, Tsodilo contains 4,500 rock art paintings by the Kalahari bushpeople. The site has been protected as a spiritual and ritual place and worshipping space of the ancestors in the Kalahari Desert. Two communities, with a total of 200 Bushmen people, relate to the same site with different stories²¹⁹.

Other issues: The area also has important biodiversity values, intimately linked with culture. The ICOMOS evaluation of the site notes that: “The diverse fauna and flora have remained largely intact because of the remoteness of the site. Mongongo nuts continue to be a food staple; a particular beetle, *Diamphidia sebae*, continues to provide poison for the !Kung's hunting arrows... The baobab tree (*Adansonia digitata*), continues to be used in different ways (food, water collection, textile raw material, medicine, manure, etc)...”²²⁰

- **Cameroon**

Protected area name and other data: Bakossi proposed National Park (several proposed sites within one area: 1) Bakossi National Park (29,320ha) consisting of Lake Edib, Kuku Falls, Mwekog; 2)

Muanenguba integral ecological reserve; 3) Muanenguba Lakes and Elangum; 4) Ancestral Burial Ground at Mwekan; 5) Mwendolengoe Hill; 6) Mount Kupe forest.

Faith and significance to the faith: Traditional. All over Bakossiland there are isolated, sacred and secret forests or groves. Bakossi planted trees in the north-east of the Bakossi Mountains to protect sacred areas and burial grounds. The Bakossi secret juju societies were the first to designate and manage these as reserved forests. These groves have been set-aside for a long time as places of meeting and ritual. Forests have been protected for tribal, village or family ancestors or gods to live. There are many different types of sacred forest: ancient meeting places or groves of the ancestors, ‘shrine-bushes’ where communities made sacrifices, planted groves that signified social boundaries, taboo forests, as well as sacred natural features such as boulders, inselbergs, waterfalls, thermal springs and crater lakes. Isolated buma trees are also conspicuous in the farmland around villages, and many of these are thought to be inhabited by ancestral spirits who protect the village²²¹. In addition, some of these spots are believed to accommodate wizards, witches and malevolent forest spirits, which take the form of animals and trees.

There are other very significant sacred sites in the Bakossi land with significant cultural and religious implications. Some of these are “Ahid de Nkang” – known to be the special resting place for spirits of Kupe on their way to or from spiritual travels to defend the tribe. Asongwa is believed by the locals to be a problem-solving venue for the Ngombobeng and Kack communities with strong ancestral backing. So too is Dion d’Eseh found in Muambong village. Finally, Ngwanekode, apart from its spiritual role of conflict resolution, represents a traditional fortification spot for the Asomengoe clan around Bekume and Makedmbeng communities.

Other issues: Botanical field collection indicates that the forest accommodating these sacred sites is richer in plant species’ diversity than the adjacent Mt. Cameroon (with 2435 species and is the richest rainforest site in Central and West Africa). Lake Beme is the richest freshwater site (relative to surface area) for fish species in the world, with nine endemic species of cichlids. Lake Edib is the only African *Sphagnum* ‘bog-eyed’ Crater Lake existing outside Rwanda/Ituri Highlands supporting a unique assemblage of afro-montane wetland plants. The Bakossi are the largest member of a linguistic group comprising some 70,000 people. They have a mystical origin as the descendents of the founding ancestor, Ngoe. Over 18 tribes developed from the sons of Ngoe inhabiting lands neighbouring the Kupe-Muanenguba in South West and Littoral Provinces.

▪ Côte d’Ivoire

Protected area name and other data: Comoé National Park. Declared: 1968; size: 1,149,250ha; IUCN Category II

Faith and significance to the faith: Traditional. One forested area near the village of Gorowi is considered to be sacred. There are apparently other sacred sites in neighbouring villages, but they have not been well identified by external people.

Other issues: The largest protected area in West Africa. Ethnic groups around the park include the Lobi, located in Bouna and Téhini, the Koulabgo in Bouna and Nassian, the Dioula in Kong and the Djimini in Dabakala. These groups are mostly reliant upon agricultural and hunting activities. Population density remains low, but the north of the park (Bouna and Téhini) is under increasing population pressure²²². The protected area is listed as an Important Bird Area for Africa by Birdlife International. In total some 494 bird species have been recorded with five of global conservation concern, including two hornbills *Ceratogymna elata* and *C. cylindricus* both of which are now very rare²²³.

▪ Côte d’Ivoire

Protected area name and other data: Tai National Park. Declared: 1973 (extended: 1990); size: 350,000 ha; IUCN Category II

Faith and significance to the faith: Traditional. Relict forests have survived because they are considered to be sacred. Inhabited by the Kwi society, the sacred forest of Zaïpobly is located in the

eastern hinterland of Tai National Park, and covers an area of 12.30 ha, unrestrictedly accessible to all. Impoverishment, soil erosion, and the introduction of monotheistic religions (Islamic and Christian) have contributed to weakening the sacred forests.

Other issues: Tai National park is the largest remnant of the original humid tropical forest in West Africa²²⁴.

▪ Ghana

Protected area name and other data: Boabeng Fiema-Monkey sanctuary. Size: ca 196 ha

Faith and significance to the faith: Traditional. The Boabeng Fiema-Monkey sanctuary in Ghana provides an example of a sacred grove that has not only been protected by customary law, but also by modern legislature under District Council by-laws and is managed as a wildlife sanctuary²²⁵. The grove is considered sacred because it supports populations of black and white colobus monkey (*Colobus vellerosus*) and Mona monkey (*Cercopithecus mona*), both of which are revered and strictly protected as sons of the gods of the people of Boabeng and Fiema villages²²⁶. So strong is the belief surrounding these monkeys that in the past, when a monkey died, the corpse was given the same respect and funeral rites as would be accorded to a human being²²⁷.

Other issues: Because of the effectiveness of the protection, this small forest supports the highest density of the two species of monkeys anywhere in Ghana (163 black and white, 347 Mona) according to a 1997 census²²⁸.

▪ Kenya

Protected area name and other data: Mt Nyiro forest reserve. Size: 18,000 ha

Faith and significance to the faith: Traditional. The Samburu believe that their god resides on top of Mount Nyiro and the mountain is his seat; although to some extent all mountains have sacred value this one has the highest significance. Sacrifices of livestock are offered at a designated area on top of Mount Nyiro and the Samburu always face the mountain to pray. Although the area is now a gazetted forest area under government protection by the Forestry Department, this mountain has been protected, for centuries, because of its religious²²⁹ significance.

Other issues: Mount Nyiro is one of the few areas with indigenous forest remaining in Samburu District. The area is under a joint management memorandum of understanding between the Forestry Department and the Kenya Wildlife Service²³⁰.

▪ Kenya

Protected area name and other data: Mount Kenya National Park. Declared: 1949; size: 58,967 ha (MAB 71,759ha and World Heritage Site 143,497ha) IUCN Category II

Faith and significance to the faith: Traditional. The site is regarded as a holy mountain by the Kikuyu and Meru local communities.

Other issues: Apart from its role as a remnant area of rainforest, with high wildlife value, the protected area also protects the watershed supplying drinking water to Nairobi. Illegal cutting is impacting on both wildlife and hydrological values²³¹. The forest zone serves as an important refuge for elephant, rhino, cape buffalo, and primates. Eleven endemic and 150 regional endemic plant species are found along with one endemic animal (the mole shrew)²³².

▪ Madagascar

Protected area name and other data: Lac Tsimanampetsotsa. Declared: 2002; size: 45,604 ha; IUCN Category II and Ramsar Site

Faith and significance to the faith: Traditional. Mitoho Cave is a sacred site and there are sacred tombs in several places within the limits of the Strict Nature Reserve. A local “fady” (taboo) acts to protect the lake and its environs²³³.

Other issues: Tsimanampetsotsa is situated in the Province of Toliara. The western part of the reserve comprises the shallow, brackish Tsimanampetsotsa lake which is saturated with sulphate of lime and contains no fish. To the east of the lake is dry forest. The vegetation is a remarkable assembly of Didiereaceae and Euphorbiaceae. Generic endemism in the southern flora has been estimated at 48 per cent. The reserve also contains at least 28 bird species endemic to Madagascar and several lemur species; reptiles have been poorly studied but the site contains some endemic species including the radiated tortoise (*Geochelone radiata*), endemic to the southern *Didierea* forests, and probably the spider tortoise (*Pyxis arachnoids*)²³⁴.

▪ Madagascar

Protected area name and other data: Amber Mountains National Park. Declared: 1958; size: 22,636 ha; IUCN Category II

Faith and significance to the faith: Traditional. Here, a traditional ceremony, the Tsakafara, is dedicated to the cult of Nature, and there is also a sacred waterfall, still visited by local people.

Other issues: The area serves as an important rain catchment area for the local town. Vegetation is principally upland tropical moist forest. There is a very diverse epiphytic flora, including ferns and orchids and lichens. There are at least 54 endemic bird species; seven amphibians including one, *Mantipus laevipes*, only known from this area; and 11 reptiles, including five presumed endemic to the mountain. Five, possibly six, lemur species occur, including fork-marked lemur (*Phaner furcifer*) and diadem sifaka (*Propithecus diadema*)²³⁵.

▪ Madagascar

Protected area name and other data: Sakoantovo. Proposed; size: 6,163 ha; and Vohimasia. Proposed; size 30,170 ha

Faith and significance to the faith: Traditional. The forests are inhabited by spirits and protected by several taboos, as well as modern community-based forest management.

Other issues: The Sakoantovo forest is located along the Linta River in southern Madagascar. The forest contains habitat typical of the spiny forests and the transitional zone to riparian forest dominated by *Tamarindus* trees. It is extremely rich in wildlife including healthy populations of five lemur species.

▪ Malawi

Protected area name and other data: Nyika National Park. Declared: 1978 (some protection since the 1930s; size 3,134 km² IUCN Category II

Faith and significance to the faith: Traditional. The protected area contains several sacred sites that are important for rain-making ceremonies, including a waterfall, a small pool (Lake Kaulimi) and a mountain. Although villagers were at one time forbidden access to the sites, they can now use them under arrangement with park authorities and rain-making ceremonies still take place.

Other issues: The area is one of the largest high grassland plateaus in Africa and has a high level of endemism, including 33 plant species, 6 endemic frogs, at least 16 endemic invertebrates and eight endemic species of small mammals. In total, 1,817 species of flowering plant have been recorded, from 684 genera and 160 families. Around 95 species of mammals and 426 species of birds have been recorded, 47 reptile species, 34 amphibian species and many insects including 220 species of butterfly. Key larger mammals include reedbuck, eland, roan antelope, zebra, warthog and common duiker²³⁶



Sacred waterfall in Niyka National Park, Malawi. Local people can use the site in rain-making ceremonies by arrangement with park authorities

Nigel Dudley

▪ Mali

Protected area name and other data: Cliffs of Bandiagara (Land of the Dogons). Declared: 1969; size: 400,000 ha; IUCN Category III

Faith and significance to the faith: Traditional. The region is one of the main centres for the Dogon culture, rich in ancient traditions and rituals, art culture and folklore. Village communities are divided into the *inneomo* and *innepuru*, living men and dead man respectively, which exist in symbiotic union with each other. Symbolic relationships also exist with respect to the environment, such as with the pale fox and jackal. Semi-domestic crocodiles are kept as sacred protectors of Bandiagara Village and its ancient founder, Nangabanou Tembèly. They are also revered in ritual rain dances.

Other issues: Archaeological evidence suggests human occupancy of the cliffs for at least the last 1,000 years, although the Dogons themselves did not arrive until the 15th and 16th centuries. Traditionally, they consisted of four tribes, the Dyon, Ono, Arou and Domno which migrated from the land of Mandé. The present-day local Dogon population is divided into small village communities, each Dogon member having a village surname shared by every inhabitant²³⁷.

▪ Nigeria

Protected area name and other data: Sacred Groves of Oshogbo. Declared: World Heritage site, 2005; Size: 55 ha.

Faith and significance to the faith: Traditional. These groves are sanctuaries for the Orisha – and of the Yoruba gods. Shrines within the site provide them with a ceremonial home, and associated sculptures embody their myths. There are five sacred spaces in the groves, plus nine worship points along the river that runs through the site, 40 shrines and two palaces. The groves in Oshogbo are the home of Oshun – the goddess of “The waters of life”²³⁸.

Other issues: The Grove is the site of an annual religious festival. It is one of the few remnants of high primary rain forest in Nigeria, 70 per cent is considered to be primary forest. The mature, reasonably undisturbed, forest canopy supports a rich and diverse flora and fauna – including the endangered white-throated monkey (*Cercopithecus erythrogaster*). Some areas were cleared in the colonial period, for teak plantations and agriculture, but these are now being re-established. The site has also experienced severe degradation in the past due to looting and other problems and its restoration has in part been at the instigation of an Austrian sculptress working with local people²³⁹.

▪ South Africa

Protected area name and other data: Limpopo’s Modjadji Reserve. Declared: 1985; size: 439 ha; IUCN Category IV

Faith and significance to the faith: Traditional. Limpopo's Modjadji Reserve is the birthplace and territory of the famous Rain Queen(s) of the Lobedu tribe who are said to have powerful mystical powers. Queen Modjadji VI, youngest of South Africa’s rain queens, died in June 2005 at the age of 27; although she had two children they were by a commoner and not acceptable as successors and there

are fears that the 400 year old rain queen dynasty may die out²⁴⁰. The rain queens were the inspiration for Rider Haggard's famous adventure story *She*.

Other issues: The Modjaji Cycad Reserve is said to contain one of the most unique floras in Africa²⁴¹, with the largest known population of a single cycad species, the Modjaji cycad (*Encephalartos transvenosus*)²⁴².

▪ South Africa

Protected area name and other data: Mapungubwe World Heritage Site. Declared: 2003 (previously Vhembe Dongola National Park); size: ca. 30,000 ha with a 100,000 ha buffer zone

Faith and significance to the faith: Traditional. Mapungubwe means a place of the stone of wisdom. Mapungubwe Hill – also referred to as the Sacred Hill of the Jackal – is the park's most famous site. Apart from Mapungubwe Hill, there are also many more archaeological sites, San rock art, fossilised termite mounds and even fossilised dinosaur footprints.

Other issues: Mapungubwe is a savannah landscape at the confluence of the Limpopo and Shashe rivers. Mapungubwe developed into the largest kingdom in the sub-continent before it was abandoned in the 14th century. Mapungubwe National Park will ultimately form the centrepiece of a proposed Transboundary Conservation Area, between South Africa, Botswana and Zimbabwe²⁴³. The area was at one time farmed, and some citrus farming and game ranching remain, although most of the area is being returned to savannah and wild animals²⁴⁴.

▪ South Africa

Protected area name and other data: Richtersveld National Park. Declared: 1991; size: 160,962 ha; IUCN Category II

Faith and significance to the faith: Traditional. The park is sacred for the Nama people²⁴⁵.

Other issues: The Richtersveld National Park is located in the arid northwest of South Africa and is the country's first contractual national park. The park is a transfrontier initiative with Namibia, with a formal agreement signed between the two presidents in 2003. At least 147 mammals, 116 reptiles, 49 species of fish, 34 different species of frogs, 500 or more species of birds have been identified. In addition, at least 2000 species of plants are known. There is a very high level of endemism²⁴⁶. This vast mountain desert, home to the world's richest desert flora, is managed jointly by the local Nama people and the South African National Parks.

▪ South Africa

Protected area name and other data: Natal Drakensberg National Park. Declared: 1903; size: 7,624 ha; IUCN Category II (also a Ramsar site and World Heritage Site covering 242,813 ha)

Faith and significance to the faith: Traditional. Numerous rock paintings by the San people (or Bushmen) can be found here. These paintings were executed by shamans and served to bring forth the spirit of the animal depicted.



The San Bushmen cave paintings in the Drakensberg Mountains of South Africa depict the sacred nature of the hunt

Nigel Dudley and Sue Stolton

Other issues: The Drakensberg Park is a mountain wilderness with the highest mountain range in South Africa²⁴⁷. It is an important water catchment, providing drinking water to cities on the coast²⁴⁸.

- **Tanzania**

Protected area name and other data: Misali Island Marine Conservation Area (MIMCA), Zanzibar. Declared: 1998; size: 2,158 ha; IUCN Category: VI

Faith and significance to the faith: Islam – see case study in Part 6.

- **Uganda**

Protected area name and other data: Kibale National Park. Size: 76,600 ha. Wetlands in the extreme south are a Ramsar site. Created 1993

Faith and significance to the faith: Traditional. 89 species are used for 26 cultural and social purposes in this area. The highest numbers of plants are used in wedding ceremonies (25 species), followed by those used against witchcraft (18), and religious ceremonies (15)²⁴⁹. Exploitation of some species is permitted in the protected area²⁵⁰.

Other issues: The site consists of medium to high altitude rainforest with a high variety of birds and many mammals including mountain gorilla.

NORTH AMERICA

- **Canada**

Protected area name and other data: Klin-se-za, also known as the Twin Sisters. Declared: 2001; Size: 2,689 ha; IUCN Category II

Faith and significance to the faith: Traditional. Klin-se-za, is a twin peaked mountain of profound spiritual significance and traditional use value to the First Nations of north-eastern British Columbia²⁵¹.

- **Canada**

Protected area name and other data: Kootenay. Declared: 1920; size: 140,600 ha; IUCN Category II

Faith and significance to the faith: Traditional. For thousands of years the area which is now Kootenay National Park was part of the traditional lands of the Ktunaxa (Kootenay) and Shuswap First Nations people. Archaeological evidence suggests the mountains were used primarily as seasonal hunting grounds. Groups also travelled across the mountains periodically to hunt bison on the plains east of the Rockies. Some sites have spiritual significance.

Other issues: The south-western corner of the park contains the only example of dry Douglas-fir/ponderosa pine/wheatgrass vegetation in Canada's national parks. This semi-arid area provides important winter range for wildlife, especially Rocky Mountain bighorn sheep. Characteristic species found within Kootenay National Park include: grizzly and black bear, wolf, coyote, cougar, lynx, wolverine, marten, marmot, white-tailed and mule deer, elk, moose, mountain goat and Rocky Mountain bighorn sheep²⁵².

- **USA**

Protected area name and other data: Coconino National Forest. Size: 747,061 ha; IUCN Category VI

Faith and significance to the faith: Traditional. San Francisco Peaks, located within the Coconino National Forest are sacred to 13 Indian tribes, and are among the four most sacred places for the Navajo Indians. They use it to collect medicinal plants, and to greet their spirits and find pathways for their prayers²⁵³.

Other issues: The protected area is unusually varied, ranging from desert through forest to tundra. The area is under the domain of the US Forest Service, which has a mandate to allow multiple uses on its lands.



Sacred Kachina Peak and Sedona Red Rocks, Arizona, USA

Courtesy of SacredSites.com

▪ USA

Protected area name and other data: Wupatki National Monument. Declared: 1924; size: 14,267 ha; IUCN Category V

Faith and significance to the faith: Traditional. This site contains 700-year-old Hopi Indian ruins. Hopis considered the area a sacred ancestral spot. For thousands of years, young members of the tribe have scaled the mesas in search of golden eagle nests. Considered messengers between the secular and spiritual world, the eagle chicks were smothered as a part of a Hopi ritual to attract rain to the area²⁵⁴.

Other issues: Higher elevations at Wupatki have Pinyon Pine and One-seeded Juniper and various grasses which provide habitat for Jackrabbits and Pronghorn Antelope.

EUROPE

▪ Bulgaria

Protected area name and other data: Rila National Park. Declared: 2000; Size: 27,370 ha; IUCN Category V

Faith and significance to the faith: Christianity. Rila Monastery Nature Park was part of the Rila National Park until 2000, when a large territory of the national park was excluded in order to return forests to the Rila Monastery. The Rila Monastery which is within the Park was founded in the 10th century by the Bulgarian monk St. John of Rila and was rebuilt 300 years later. At least half a million visitors come to the area every year. Pilgrims come to pay homage to St. John resting in his casket. Rila is an important source of spiritual and cultural inspiration for the Bulgarian arts and sciences.

Other issues: Rila Monastery Nature Park occupies about a quarter of a percent of the country's territory but contains almost half of Bulgaria's plant species and a third of all vertebrate species. Rare or endangered species include: the imperial eagle, otters, brown squirrels, Dalmatian eagles, mountain grouse, the Balkan chamois and the wolf. Some of the trees in the Park are over 300 years old. The trees have an average age of 160 years with Macedonian pine alongside beech forest or Rila oaks. The Park is also famous for its 203 species of medicinal plants²⁵⁵.

▪ Czech Republic

Protected area name and other data: Čertova stěna (Devil's wall). Declared: 1956; Size: 105 ha; IUCN Category: IV

Faith and significance to the faith: Traditional, Christianity. A large stone above the river is called the Devil's pulpit, and the steep rock under it full of stones, Čertova stěna (Devil's wall). This rock used

to be called Strašidelník (Ghost). According to legend it used to be a sacred place where the old Slavs worshipped the god of good, Svatoroh. Christians used this legend to create a new one, where evil was represented by the Devil, and good by the monastery in Vyšší Brod. The Devil disagreed with the construction of the monastery in Vyšší Brod. He wanted to create a dyke in the valley which would hold the water and flood the monastery and therefore threw large boulders into the river Vltava. The work had to be finished before the cock crowed three times. The Devil was unsuccessful; after the third crow of the black cock, his power evaporated. The bell at the monastery rang and the Devil had to let go of the stone he was holding, leaving an imprint of his hand²⁵⁶.

▪ Estonia

Protected area name and other data: Otepää LP, Pühajärve skv (Landscape Reserve).

Size: 603 ha, IUCN Category V

Faith and significance to the faith: Buddhism. Lake Puhajärv – the Holy Lake – is one of the outstanding places of beauty in Estonia, having been recognised and blessed by the Dalai Lama as a holy site. The nature around Otepää has been claimed to have an especially strong healing effect, and people have been known to come from far away for its energy-giving power. Traditional small farms dot the hilly landscape, and the traditional ways of Estonian farm life have been largely preserved.

Other issues: Otepää is the home of many rare species of plants and animals, including many species of orchids, the Black Stork (*Ciconia nigra*), Osprey (*Pandion haliaetus*) and White-backed Woodpecker (*Dendrocopos leucotos*)²⁵⁷.

▪ Finland

Protected area name and other data: Northern Karelia. Declared: 1992; size: 350,000 ha, UNESCO Man and the Biosphere reserve, containing four core areas : Petkeljärvi National Park, Patvinsuo National Park, Koivusuo Strict Nature Reserve and Kesonsuo Nature Reserve.

Faith and significance to the faith: Christianity – see case study in Part 6.

▪ Finland

Protected area name and other data: Pyätunturi National Park. Declared: 1938; Size: 4,340 ha; IUCN Category II.

Faith and significance to the faith: Traditional. The isolated high fell, well known for magnificent views, was a sacred place to the Lapps. Certain fells, unusual stones, lakes and trees are “seita”, places where Sami sacrificed reindeer and reindeer horn, blood and fat for good fortune in hunting, fishing and reindeer husbandry.

Other issues: The mountain is one of the oldest in the world, with rocks dating back 2 billion years. It is an important site for studying the ecology of treeline forests²⁵⁸.

▪ Greece

Protected area name and other data: Meteora Group of Monasteries. Size: 375 ha; IUCN Category III

Faith and significance to the faith: Christianity. The Meteora Group includes the monasteries of: Ascension of Jesus Christ; Transfiguration of the Saviour; Varlaam, Saint Nikolas Anapafsas; Roussanou; Holy Trinity; and Saint Stephan. These are built directly on the rock’s surface without foundations. Religious life, starting in the form of hermit dwellings, can be traced back to around 1,000 AD. The first monastic community emerged in the 14th century, and was most successful during the 15th and 16th centuries. By the 17th century, the monastic population had dwindled to one-third of its original size²⁵⁹.

Other issues: The area includes forested hills and river valley with riverine forests of *Platanus orientalis* and species such as the endemic *Centaurea lactifolia* and *Centaurea kalambakensis*. The Trikala Aesthetic Forest (28 ha), created in 1979, is also close by; the vegetation in this area is described as supra-mediterranean, with climax cover of *Quercus* spp. and *Ostrya* spp. and beech (*Fagus sylvatica*) forest above 700m. Mammals include grey wolf and otter. Birds include the sombre tit (*Parus lugubris*). The area remains of importance for birds of prey, with breeding species of honey buzzard (*Pernis apivorus*), black kite (*Milvus migrans*), Egyptian vulture, short-toed eagle, Levant sparrowhawk (*Accipiter brevipes*), lesser-spotted eagle (*Aquila pomarina*), booted eagle, Bonelli's eagle and peregrine falcon. In addition, black stork (*Ciconia nigra*) breed and roller (*Coracias garrulus*) are found²⁶⁰.



Greek Orthodox monastery of Rousanou, Meteora, Greece

Courtesy of SacredSites.com

Faith and significance to the faith: Christianity. The Subasio is the “Monte de Assisio” because Assisi and its Mount live in a sort of symbiosis which dates back to ancient times. Subasio Monte gained a sacred and mystic connotation for the Umbrian population in the 10th Century BC²⁶¹.

▪ Russian Federation

Protected area name and other data: Yuganskiy Kanthy. Declared: 1982; size: 648,700ha; IUCN Category Ia

Faith and significance to the faith: Christianity. The protected area has been created around Lake Numto – a Khanty and Nenets sacred place – in Beloyarsk region.

Other issues: There are some rare plant species: for example: *Cypripedium calceolus*, *Cypripedium macranthon*, *Calypso bulbosa*. The fauna is middle-taiga. There are about 50 mammal species, including: reindeer, moose, brown bear, lynx, wolverine, sable; about 200 bird species, including osprey, white-tailed eagle, golden eagle, black stork and migrating populations of the Siberian crane and red-breasted goose. The beaver colonies are protected. More than 10 valuable fish species have their spawning grounds in the Zapovednik.

▪ Sweden

Protected area name and other data: Laponian area. Declared: 1996; Size: 940,000 ha ; World Heritage Site. This area is made up of: Muddus National Park 50,000 ha; Padjelanta National Park 198,400 ha; Sarek National Park 197,000 ha; Stora-Sjöfallet National Park 128,000 ha; Sjaunja Nature Reserve 285,000 ha; Stubba Nature Reserve 35,000 ha; Sulitelma Glacier area 23,000 ha; Rapa Valley Delta area 2,000 ha and Tjuolta Valley area 20,000 ha.

Faith and significance to the faith: Traditional. Sacred sites are of great significance in Sámi culture, which perceives the world as a living, interconnected entity in which human beings are one part of many. The Sámi practise a shamanistic spirituality rooted in a respectful, harmonious relationship with nature. The land itself is considered sacred. Sacred places, known as *sieidi*, usually consist of a stone or wood of a special shape to which gifts are given as thanks for the abundance of the land and to ensure luck with fishing, hunting and reindeer. Although Christianity has eroded Sámi *sieidi* practices, *sieidi* gifting is still practised. Another characteristic of the Sámi worldview is the understanding that ancestors are present in certain locations which are considered sacred. These places, which traditionally

have been the focal points of ceremonies, can be found in locations important for traditional Sámi livelihoods such as in the vicinity of migration routes, settlements, hunting grounds and fishing sites²⁶². One of the features of Sami sacred sites is their location on outstanding formations in the landscape.

- **Turkey**

Protected area name and other data: Göreme National Park and the Rock Sites of Cappadocia.

Declared: 1986; Size: 9576 ha; IUCN Category V

Faith and significance to the faith: Christianity. In the year 330 Saint Basil the Great, Archbishop of Caesarea, the administrative centre of Cappadocia, was born. Byzantine churches and monasteries can be found carved in the landscape of Cappadocia. Monastery life started around the end of the 3rd century and beginning of the 4th century and spread rapidly. Monasteries, churches, chapels, dining halls, cells, warehouses and wineries are carved and decorated with wall paintings.

Other issues: The Park is situated in the volcanic region of Hasan Dağı, and Erciyes Dagi in Central Anatolia. The basalt lavas of Miosen and Pliosen periods and volcanic ashes covering the surroundings were formed as a result of Erciyes volcano. The volcanic ash formations composed of a protective basalt cover have been hardened due to the heaviness of the accumulations above them. The unique formations have been created as a result of this, together with the erosive forces of water and wind. The final result is the formation of earth pillars or so called “fairy chimneys”.

Dwellings have been hewn from the rock as far back as 4,000 B.C. During Byzantine times, chapels and monasteries were hollowed out of rock, their ochre-toned frescoes reflecting the hues of the surrounding landscape.

The inhabitants of the zone – due to the unique characteristics- have succeeded in staying far from the effects of wars and authority of central administration. Because of the distance from the main roads and its rough surface, the area has become a suitable protective place for those who want to hide or those who want to retire in religious seclusion.

- **Turkey**

Protected area name and other data: Agri Dagi N. Park (Mt Ararat). Declared: 2004; Size: 87,380 ha; IUCN Category IV

Faith and significance to the faith: Christianity and Judaism. Mt. Ararat is situated in eastern Turkey at the border with Armenia and is believed to be the resting place of Noah’s Ark. The story of Noah’s Ark, as it is told in the Old Testament, is a reworking of a Babylonian tradition recorded in the Gilgamesh Epic. According to the Bible, Noah was the only survivor of the great flood which God inflicted on the Earth because of his disappointment with humanity. God warned Noah of the flood, and told him to build a boat in which his family as well as a couple from each animal species was to be protected. The Book of Genesis (8:3-4) relates: “And the waters returned from off the earth continually: and after the end of a hundred and fifty days the waters decreased. And the ark rested in the seventh month, on the seventeenth day of the month, upon the mountain of Ararat”²⁶³.

- **Turkey**

Protected area name and other data: Altindere Vadisi N. Park (Sumela Monastery). Declared: 1987; Size: 4800 ha; IUCN Category IV

Faith and significance to the faith: Christianity. Founded in the name of Virgin Mary, the Sumela Monastery is at an elevation of 1,300 m at the western side of Altindere Valley. The monastery helped to bring Christianity into the area and has an important artistic heritage. According to legend the monastery was built in the 4th century BC, although the 3rd Alexios Komnenos (1349-1390) from Trabzon is the genuine founder.

Other issues: The dominant species in the zone is the oriental spruce (*Picea orientalis*). In the area, rich vegetation composed of a mixture of broadleaved and coniferous trees such as fir, yellow pine,

chestnut, oak, basswood, hornbeam, willow, elm, maple, and Caucasian honeysuckle can be seen. Red deer, roe deer, chamois, wild boar, wolf, jackal, fox, and wild cat are all present²⁶⁴.

MIDDLE EAST

▪ Egypt

Protected area name and other data: St Catherine; Declared: 1996; Size: 575,000 ha; IUCN Category II

Faith and significance to the faith: Christianity, Islam, Judaism – see case study in Part 6.

▪ Israel

Protected area name and other data: Mt Carmel. Declared: 1996; Size: 8,400 ha (UNESCO MAB: 26,600 ha); IUCN Category V and UNESCO Man and the Biosphere Reserve

Faith and significance to the faith: Judaism. The Ha'arbaim Grove contains over 80 kermes oaks which are considered holy by local residents who grant them special treatment and protection.

Other issues: The most striking aspect of Mount Carmel is its typical Mediterranean scrub forest. Carobs are the predominant tree in this particular area. The Carmel Mountain Range also has one of the only natural populations of Aleppo pines in Israel. Forests of Aleppo pines grow on the chalk in the higher reaches of the mountain, especially near Ussifa and Kibbutz Beit Oren²⁶⁵.

▪ Israel

Protected area name and other data: Baram. Size: 21 ha; IUCN Category III

Faith and significance to the faith: Judaism and Christianity. The ancient synagogue of the village of Baram was constructed from large and particularly beautiful hewn stones. Baram National Park is a popular venue for bar/bat mitzvah parties and weddings. The church from the Christian Maronite village of Biram remains intact and now is the spiritual center of the members of the Maronite community.

Other issues: Near the synagogue is the Baram Oaks Nature Reserve, a rare natural forest with unusually tall kermes oaks²⁶⁶.

▪ Israel

Protected area name and other data: Hermon River nature reserve (Banias). Declared: 1977; Size: 81 ha; IUCN Category IV

Faith and significance to the faith: Christianity. One of the seminal events in the history of Christianity took place in Caesarea Philippi. It was here that Jesus asked his disciples, "Who do people say the Son of Man is?" Simon Peter answered, "You are the Christ, the Son of the living God." Jesus then replied, "Blessed are you, Simon son of Jonah, for this was not revealed to you by man, but by my Father in heaven" and gave Peter the keys to the kingdom of heaven (Matthew 16: 13-20). Christians make pilgrimages to Banias and make use of the two prayer areas there²⁶⁷.

▪ Lebanon

Protected area name and other data: Harissa forest. Size: 400 ha, private protected area

Faith and significance to the faith: Christianity. The Maronite Church's cathedral and shrine to Our Lady lie at the heart of the Harissa forest. The Maronite Church – representing Lebanon's most popular form of Christianity – owns a large proportion of the forest and in 2000 the Church made a public pledge to preserve its forest. In June 2003, the Church established a full Management group to oversee the ecological protection of the Harissa Forest in association with the municipality of Jounieh. The city

agreed to purchase a further area of adjoining privately-owned forest land to keep in its natural state, and several private owner families are also discussing committing to protect further areas of adjacent forest land.

The Maronite church is Orthodox in practice, but formally linked to the Catholic Church. It owns considerable land holdings in Lebanon and in the spirit of its 7th century founder, St Maron, it is now exploring how to create other Maronite-Protected Environments, including the sacred Qadisha Valley in Northern Lebanon (see below)²⁶⁸.

WWF has named the Harissa forest as one of the top ten “Forest Hot Spots” in the Mediterranean.

▪ **Lebanon**

Protected area name and other data: Ouadi Qadisha (the Holy Valley) and the Forest of the Cedars of God (Horsh Arz el-Rab). Declared: 1998; Size: 646 ha

Faith and significance to the faith: Christianity

Other issues: See case study in Part 6.

▪ **Yemen**

Protected area name and other data: Socotra Island. Size 362,500 ha

Faith and significance to the faith: Christianity. The Socotra Archipelago contains unique aquatic and terrestrial ecosystems and species, with limited impact from human activities. The rich cultural heritage of the region, especially in the narrow coastal zone, includes large numbers of significant archaeological, historical and sacred sites which are increasingly at risk from development pressure.

Other issues: Situated at the eastern extreme of the Gulf of Aden, the Socotra Archipelago, which is part of Yemen, is of global significance for island biodiversity and species’ endemism. Over one third of its plants are endemic to the archipelago, making it one of the top ten island groups in the world in terms of endemism. Many of these endemics are remnants of an ancient flora which long ago disappeared from the African-Arabian mainland. Unlike many island groups in the world, Socotra has remained virtually untouched by modern development and there is no evidence of recent extinction or large-scale changes in the vegetation. The marine environments of Socotra Archipelago remain largely in a pristine state, unaltered by coastal pollution or over-exploitation. Of the 850 plant species found on the island group, at least 277 are endemic. Six endemic bird species have been recorded on Socotra Island. Recent surveys revealed that the archipelago could be an extremely important area for marine biogeography²⁶⁹.

Analysis

The survey outlined in the previous pages is not comprehensive; indeed, it barely scratches the surface of the world's array of sacred natural sites within protected areas. It would, for instance, be hard to find a single large protected area in Australia that does not contain one or more sites sacred to the aboriginal people within it. Nonetheless, some overall trends can be inferred even from this small sample:

- **Virtually any faith can have a direct link to a protected area** – although the form that the connection can take will vary dramatically.
- **The majority of direct connections between faiths and protected areas appear to be from traditional faiths** – despite looking particularly for links with the mainstream faiths, over half the examples summarised are associated with traditional faiths and we could have listed far more.
- **Sacred sites occur in protected areas throughout the world** – this is not an issue confined to one geographical region or to a particular cultural type or level of economic development, sacred natural sites occur wherever people live and interact with the natural world.
- **Many of the sacred sites are also particularly rich in biodiversity** – we did not analyse every one of the sites identified. But those that we looked at in more detail were all sites where rare species and endangered habitats co-existed with the uses that the faiths made of the site.
- **Links include both sacred natural sites and natural sites around sacred buildings** – many of the associations with some of the faiths (e.g. Christianity and Islam) are with built structures in natural areas rather than with the natural areas themselves; both can be important from the perspective of conservation.
- **Protection of sacred areas can either be incidental or integral** – many of the sacred natural sites ended up in protected areas almost by accident, when the area was protected for other reasons. But some sites are deliberately being included in protected area systems *because* they are sacred sites and their wider value has been recognised.



Left: Sacred natural site in Mongolia

Right: Mani stones (rocks carved with prayers) can be seen throughout Baimaxueshan Nature Reserve, Deqing Tibetan Autonomous Prefecture, Yunnan Province, China

Alexander Belokurov (left); © WWF-Canon / Ramy Inocencio (right)

Part 5: Sacred sites outside protected areas

The survey above showed that many sacred sites already exist in protected areas. But most are still found outside. One of the key issues to be resolved by faiths, local communities and protected area agencies is whether or not a particular site would benefit from being “officially” recognised. The next section contains some examples of sacred places that are currently protected – to the benefit of both faith communities and the wider environment – outside any officially recognised protected area system.

South Africa: Lake Fundudzi

Lake Fundudzi is an inland lake at 1400m above sea level in the Soutpansberg region of Venda. Local people believe it was chosen by their original leader and deity, Nwali, who came to the site as a tornado and blessed the region. According to traditions the lake contains the spirit of ancestors and numerous gods. The Vhavenda people undertake rituals to pay homage to the lake. For instance, some people turn around, bend over, and grab their knees, peer at the lake through their legs and spit on the ground before approaching. When someone dies, the Netshiavha people first bury the body in a graveyard at home and after a certain period dig out the grave and exhume the bones which they burn. The ashes are carried away in a reed basket, and thrown in the stream that flows into the lake²⁷⁰.

Ghana: Tafi Atome

The Tafi Atome Monkey sanctuary is in the Volta region 200km north of Accra. It is a sacred grove containing some of the last True Mona monkeys (*Cercopithecus mona mona*) in Ghana, which are revered as messengers of the gods. Thanks to the monkeys, the remnant patch of forest has been protected by the local population. Although not a protected area, this sanctuary is a traditional conservation area backed by statutory enforcement in co-operation with local communities²⁷¹.

Lao PDR: Protection of fishing pools in the Mekong

Traditional beliefs give importance to forests where ancestral spirits are believed to dwell. By paying tribute to the spirits, villagers believe that they will be protected and receive guidance. There are also many areas along Mekong tributaries that have associations with ancestral spirits, which are protected to satisfy the ancestors. Along the Xe Bang Hieng, one of the largest tributaries, deep pools in the river channel are believed to contain ancestral spirits. Nearby villages consider themselves the guardians of the spirit and have adopted unique fishing regulations to demonstrate their respect and ensure that the spirit continues to protect their villages. The pools also represent an important refuge habitat for fish during the dry season months when water levels are low²⁷².

Madagascar: Sacred spiny forests

The Mahafaly people of the south-west recognise nine categories of sacred forests, with a range of management regimes and sanctions. The most important is a forest with a tomb of a king or a dignitary and customary law allows only specified persons – usually members of the royal family – to enter, collect products or make fire. Sanctions range from sacrificing eight zebus for burning, to one zebu for entering. The Tandroy people to the south consider that sacred forests shelter genii, spirits, occult powers and mythical animals which are absolute owners of the land²⁷³. WWF carried out an inventory of sacred forests in the Spiny Forest ecoregion, covering 63,000 ha. Several traditional faith leaders expressed concern for the conservation of sacred forests and are working with WWF and the Ministry of the Environment, Water and Forests to strengthen conservation, resulting in handover of the sacred Sakoantovo forest to a local management committee. This requires communities be organised through a management structure and a *dina* (customary law) regulating use. The transfer provides communities with the authority to control access to sacred forests and enforce sustainable management. WWF celebrated the commitment to conserve this and other sacred forests as a Gift to the Earth²⁷⁴.

Ethiopia: Sacred forests of the Orthodox Christian church and monasteries

In northern and central Ethiopia, woodland on the hills surrounding a monastery or in and around churchyards is often all that remains of the once extensive forests. The Ethiopian Orthodox Tewahido Church maintains a long tradition of conservation. The reasons are both spiritual and material (as a

source of fuel wood and as shade during mass and religious festivals). Juniper (*Juniperus* spp) is favoured for artefacts. The woodlands occupied by church and monastic communities are also important as habitats for biodiversity, sources of germplasm, and as indicator sites of the original ecological landscape²⁷⁵. The Alliance of Religions and Conservation is involved in a project with the University of Wales, the Ethiopian Wildlife and Natural History Society and the Ethiopian Orthodox Church to promote conservation and regeneration of these relict areas. A survey showed that church woodlands are clearly regarded as sacred but are often under threat.²⁷⁶

Japan: Mount Fuji

The name “Fuji” most likely came from an indigenous Ainu word meaning “deity of fire”. In about 800 AD, a shrine was built near the base of the mountain with the hope of placating the god that caused the volcano’s eruptions. Fuji later became regarded as the dwelling of the Shinto goddess *Konohana Sakuya Hime*, “the Goddess of the Flowering Trees.” Today, she is still the principal deity of the sacred mountain, revered in Shinto shrines at Fuji’s base and summit. Buddhists found in Fuji an inspiring symbol of meditation and called its summit “*zenjo*,” a term describing a perfect meditative state. They also came to regard Fuji as the abode of the Buddha of All-Illuminating Wisdom. In the 14th century, Shugendo practitioners established the first climbing route to lead pilgrims to Fuji’s summit. Four centuries later, Fuji-ko, societies devoted to the worship of Fuji, became a major religious movement and inspired thousands of people to embark on annual pilgrimages. Those unable to make the climb used lava sand from the mountain to create miniature Fujis in home gardens and Shinto shrines.

With hundreds of thousands of visitors climbing Fuji each year, pollution caused by tourism has been an issue of concern for those who revere the mountain. In the 1960s, Japan built a highway halfway up the mountain, unleashing a tourism boom that over the course of decades has fouled the peak and its environs with litter and sewage. In the early 1990s, the situation finally compelled local citizens and environmental groups to seek protection for Fuji by petitioning to have the volcano declared a World Heritage site of UNESCO. But after a visit in 1995, UNESCO representatives concluded that although Mount Fuji was worthy of World Heritage listing, Japan first would have to solve the pollution problems and implement an effective management plan. In 1998, environmentalist and climber Toyohiro Watanabe founded the Fujisan Club to combat Mount Fuji’s pollution problem by organizing cleanup efforts, raising public awareness and building alliances with “sister mountains” in other countries. Through the sister mountains programme, launched in 2003, the club has linked with the national parks of Mount Rainier in the United States, Mount Ngauruhoe in New Zealand, and Mount Kinabalu in Malaysia. Beyond building public awareness, Watanabe hopes that his group will be able to learn from the management practices of these national parks and help the Japanese government apply them to Mount Fuji, ultimately enabling the mountain to obtain World Heritage status²⁷⁷.



Mount Fuji, Japan: Only 60 miles from Japan's heaving capital city, Fuji San has an almost perfect volcano cone.

Courtesy of SacredSites.com

Estonia: Sacred trees in Võrumaa

The main criteria for taking primeval trees under protection are their historic, cultural and scientific value. There are 36 protected primeval trees in Võrumaa. Many of them have been trees growing in a sacred grove, or sacrificial trees. Examples include the king of the Estonian oaks the Tamme-Lauri Oak, which is 680 years old and has a circumference of 8 metres and the Pältre Candlestick Spruce is the grandest of the Estonian candlestick spruces. Legend has it that a ghost lives in the Tamme-Lauri Oak, which sends misfortune and evil to the surroundings. It is said to be a ghost of fire, which has burnt the Urvaste schoolhouse down several times. The name originates from the word Laurits – god of fire. From a distance the Pältre Candlestick Spruce looks like a small spruce grove growing at the edge of the meadow. Actually it is one spruce, which has 11 crowns²⁷⁸.

Conclusions

Although we have listed only a few here, the majority of sacred natural sites continue to exist outside protected areas. Some of these are clearly well protected and there appears to be no very good reason why they should not continue to maintain a co-existence between spiritual and conservation values into the future. In other cases, both these values are under threat and there may be common cause in looking at some official form of protection as a solution.

Part 6: Case studies

The analysis given in part 5 is necessarily brief. Below we have expanded on some of the examples, giving additional detail but also trying to extract pertinent lessons for both conservation and faiths.

Mijikenda Kaya sacred forests: Kenya: Stephanie Mansourian²⁷⁹

Basic Data:

Declared: Ongoing. (23 sites declared as National Monuments in 1992, plus a further 17 since).

Total area: 6,000 ha total (in scattered patches)

Category: Unset (National monument)

Faith: Traditional (Bantu tribes)

Background

The sacred Kaya Forests are situated on the coastal plains and hills of Kenya. There are a vast number of such forests, which lie scattered (in patches from ten to two hundred ha) in what was once an extensive and diverse lowland forest in the coastal districts of Kwale, Mombasa, Kilifi and Malindi. Many of these forests have not been properly surveyed or demarcated, although to date 40 Kaya forests have been gazetted by the government as national monuments.

The Kayas owe their existence to the beliefs, culture and history of the nine coastal Mijikenda ethnic groups: the Giriama, Digo, Duruma, Rabai, Kauma, Ribe, Jibana, Kambe and Chonyi.

The word Kaya means 'homestead' in Bantu. Historically, the Kaya forests sheltered small fortified villages of the various tribal groups when they first appeared in the region ten generations or more ago. They took refuge in the forest settlements from the onslaught of nomadic tribes such as the Orma or Galla, who had driven them from their former settlements north of Tana, in what is present day Somalia. According to Mijikenda tradition, as conditions became more secure, particularly since the late nineteenth century, the villagers began to leave the forest and started to clear and cultivate away from them. They spread and occupied many of their current locations, which usually include a Kaya as a nucleus or focal point. The Kaya are however, no longer inhabited, except by a few village elders. They are now essentially used by the Mijikenda people for communal ceremonies, burials, places of prayer and also as sources of non-timber forest products such as fruits, medicinal herbs and lianas. Each Kaya has its own Committee of Elders, all of which are men.

In the Mijikenda tradition it was forbidden to cut down and remove trees from the Kaya, with the result that these patches of forests have survived as 'islands in a sea' of agriculture and other land uses. Nonetheless, in the last three or four decades, with an erosion of cultural values, and potential economic gains from forest conversion (to tourism, mining), many Kaya forests have been greatly reduced in size. According to latest estimates, the total area covered by Kayas and related forests is roughly 6,000 hectares, or about 10 per cent of Kenya's remaining coastal forest.

With the gazettelement of a number of Kaya forests in 1992, the Coastal Forest Conservation Unit (CFCU) was established under the National Museums of Kenya specifically to protect the kaya forests as National Monuments and to establish and enforce an appropriate legal status for these forests. Forest demarcation and surveying, botanical data collection, socioeconomic survey, forest extension and enhancement of education and public awareness programmes are being undertaken.

Religious importance

Traditionally, the Kaya was the central clearing in the forest and the settlement. It could be approached only by a few specific paths. In this central clearing burial sites of ancestors can be found and their spirits remain there and can be venerated in this spot. The graves of great leaders were kept somewhat apart and are also treated as shrines.

At a secret spot near the central clearing the *Fingo* is buried, a powerful protective talisman of the tribe which came from their original home in the north. Certain old trees and unusual landforms such as caves also have ritual importance.

The cutting of trees and other activities that could potentially cause damage to the forest around the Kaya and sacred spots was strictly forbidden by the Kaya Elders. This included collecting or removing dead logs or twigs or any other forest material. One kept to the traditional paths and avoided wandering freely in the forest — trampling vegetation and disturbing secret sites — and grazing livestock in the forest was forbidden. Any structures built for ritual purposes used materials from the Kaya forest. In addition to these restrictions on physical interactions at the site, there were behavioural controls as well; designed to maintain the tranquillity of the Kaya. Blood was not to be shed within the Kaya under any circumstances. However, all members of the Kaya community were entitled to visit the site if they so wished, as well as using the site under the Elders' guidance for ritual and ceremonial purposes. Should any member of the community attempt to cut down trees or otherwise disrespect the Kaya, they were fined livestock or fowl, which were then sacrificed to appease offended spirits.

These “spiritually policed” methods have proven valuable in terms of conservation, as they preserved the forest vegetation of these sites.

Biodiversity

The Kaya forests are diverse and have a high conservation value. The sacred forests harbour many endemic species and in some cases remnant populations of those endemics.

While not all Kayas have been surveyed, the 30 ha Kaya Kinondo for instance was found to have 187 plant species of which two are unique to the region: the endangered *Ziziphus robertsoniana* and an undescribed species only known from Kinondo and one nearby forest. The forest is also rich in fauna with more than 48 bird species recorded in the area, of which two are endemic and one threatened, while local mammals include the endangered Zanj elephant shrew (*Rhynchocyon petersi*).

The larger ecoregion within which the kaya forests can be found, the Eastern African Coastal Forests, harbours over 4,500 plant species, at least 158 species of mammal, and 94 reptile species. At least 400 plant species are strictly endemic to the forest patches of this ecoregion, and at least a further 500 species are strictly endemic to the non-forest vegetation.

This high rate of species richness is due to the mixing of habitats in the ecoregion, and hence the large number of savannah, wetland and forest species which can be found in close proximity. Strict endemics include Ader's duiker (*Cephalophus adersi*, EN), Pemba flying fox (*Pteropus voeltzkowi*, CR), two other poorly known bat species (*Chalinolobus kenyacola*, DD) and (*Pipistrellus permixtus*, DD), golden-rumped elephant shrew (*Rhynchocyon chrysopygus*, EN), Tana River Red colobus (*Procolobus rufomitatus*, CR), Tana River mangabey (*Cercocebus galeritus galeritus*, CR), Zanzibar red colobus (*Procolobus kirkii*, EN), and the rodent *Grammomys caniceps*. Larger mammals in the ecoregion are generally habitat generalists that use forest patches and other habitats in the ecoregion. These include bushpig (*Potamochoerus porcus*), bushbuck (*Tragelaphus scriptus*), yellow baboon (*Papio cynocephalus*), elephant (*Loxodonta africana*), leopard (*Panthera pardus*), lion (*Panthera leo*), and caracal (*Caracal caracal*). Endemic reptiles are found in the geckos (*Gekkonidae*), chameleons (*Chameleontidae*), skinks (*Scincidae*), lacertid lizards (*Lacertidae*), worm-snakes (*Typhlopidae*), and true snakes (*Atractaspididae*, *Elapidae*, and *Colubridae*).

Conclusions and lessons learnt

Over the past three or four decades there has been a decline in knowledge about and respect for traditional values in the coastal regions of Kenya, due to economic, social and cultural changes. This has been combined with a rising demand for forest products and land for agriculture, mining, and other economically attractive activities such as tourism, to the detriment of Kaya forests and the Mijikenda culture and traditions. The valuable land on which the Kayas can be found has led to their own degradation with tourist resorts for instance, replacing traditional forest (e.g. : along the south coast, the

Digo Kayas). By the time an active conservation programme began to be implemented for the Kayas in the early 1990s, the sacred forests had suffered considerably.

Kenya's official designation of the Kayas as national monuments and forest reserves has provided an element of state protection to bolster the greatly weakened traditional systems. In the future it will be important to strengthen and support institutions at the local level — for example, giving the Kaya Elders' committees and conservation groups legal status.



House of spirits: Mijikenda elders at Chizia Cha Nyere, sacred spot where ceremonies start. Kaya forests, Kenya.

© WWF-Canon / Elizabeth Obel-Lawson

Misali Island Marine Conservation Area (MIMCA), Zanzibar: Liza Higgins-Zogib²⁸⁰

Basic data

Declared: 1998

Total area: 2,200 ha

Category: VI

Faith: Islam

Background

The paradise islands of Zanzibar conjure up spicy, exotic images of endless white sandy beaches, blue skies and crystal clear waters. And at a first glance the reality does not disappoint. Tourism is on the rise annually, and it is fast becoming the western honeymooner's dream destination. But when Misali Island was identified by foreign hotel developers as an ideal tourist resort, the local fishing community opposed the business venture. This is a story of communities taking a stance to protect the environment and their livelihoods, and the use of the holy teachings of the Qu'ran to strengthen the arguments for conservation and sustainable use.

Biodiversity

Misali Island is a small, uninhabited piece of paradise lying just west of the coast of Pemba^v. Surrounded by some of the richest coral reefs the Indian Ocean has to offer, Misali was declared a Marine Conservation Area in May 1998. The island, only 200 hectares of mostly forested land, with an area of rich coral reef and a turtle nesting beach, forms the core of the protection zone (where fishing and other forms of exploitation are prohibited), with the whole area totalling 2,200 ha^{vi}. It provides a crucial nesting site for Green and Hawksbill turtles and indeed Misali is now probably one of the most important turtle nesting sites in Tanzania, and is possibly of regional significance in the Western Indian Ocean. Forty-two genera of coral form spectacular underwater gardens teeming with over 300 species of fish. Even the land area is significant from a conservation point of view as the endemic pemba flying fox (*Pteropus voeltzkowii*), *Vulnerable* on the IUCN Red List, occasionally roosts there, and there is a relatively large population of the threatened coconut crab (*Birgus latro*), *Data Deficient* on the IUCN Red List.

Conservation issues

A tropical paradise indeed... But with a growing number of mouths to feed, and less fish in the sea, the reality of living and making a living in paradise has recently become altogether less enticing. Many of Tanzania's fishing communities have traded their nets and lines for illegal fishing gear in recent years to ensure their daily catch. Destructive fishing techniques such as the use of dynamite, fine-meshed nets and the *kigumi* method are used around Misali. The *kigumi* method consists of a team of fishermen equipped with snorkelling gear and poles, who dive down to the reef and enclose an area with a weighted net. They then proceed to beat the coral with their poles to frighten the fish into a fine-meshed net. This method, indigenous to the fishermen of Kojani Island on the other side of Pemba, not only damages and kills the coral habitat, but produces a considerable amount of by-catch, which is later discarded back into the sea. Some have said that this method is even more harmful than the notorious dynamite fishing. All of these unsustainable fishing methods threaten not only the pristine beauty of underwater Misali, but also lead to a decline in fish stocks and threaten the livelihoods of the Pemba fishing community.

In the early 1990s, despite previous recommendations for Misali to be made a nature reserve^{vii}, interest from foreign investors (particularly from South Africa and Europe) to make the area a tourist resort was strong. They argued their case to the government of Zanzibar that an exclusive hotel development project on the island would result in important foreign currency and that the environment would be

^v Pemba and Unguja are the two main islands that make up Zanzibar

^{vi} Or 22 km²

^{vii} World Tourism Organisation report, 1983 suggested that Misali be designated a nature reserve; UNEP studies also identified Misali Island as one of Tanzania's sites that should be protected because of its intact shallow coral reef formations, 1987.

well protected in return. Their persuasive arguments were convincing enough for the government to lease out the island to a private company for hotel development in 1993.

The prospect of no longer having access to the island and its important resources incited a keen response from the Pemba fishing community who traditionally fished the waters of Misali. Indeed, fishing in the vicinity of the island is estimated to provide for around 11,500 people on Pemba in some 36 villages. The fear was that a luxury resort would have almost certainly excluded the local communities from use of resources, as has happened in other island resorts in the region and further afield where little of the generated revenue actually goes towards community growth and development.

In an initial bid to stop the lease of the island, the fishing community joined forces with conservation groups^{viii} to present a case against exclusive development: a case which found favour with the government due not only to local opposition, but also because of advocacy from the Ministry of Environment. The lease of the Island was stopped.

A series of meetings between the various stakeholders confirmed the need to protect Misali Island for its biological and socio-economic values. It was decided to designate it a Conservation Area that gave restricted access and use rights to the fishermen. The Conservation Area, classed as an IUCN category VI protected area, allows for sustainable use of resources. As is fitting in such circumstances, the Conservation Area is run by a management committee made up mostly of fishermen as well as government representatives in accordance with the Ministry for Agriculture and Fisheries.

The creation of a Conservation Area has had positive results. For one thing, any future plans to make a luxury resort of the island and attract more tourists are thwarted in advance. However, while the conservation area may have saved Misali from a certain growth of unwittingly damaging tourists, it has been unable in itself to curb the unsustainable harvesting techniques. Much had yet to be done to heighten the environmental awareness of the local communities.

Religious issues

Over 95 per cent of the Zanzibar population is Muslim. Many believe that Misali Island itself is a Holy place due to the fact that its shape points towards Mecca, and the conviction that Hadhara, a Muslim prophet, prayed there using the ground as a prayer mat. In fact it is said that the island's name came from *masalla*, the Arabic word for prayer mat. The island is also of cultural and spiritual importance to some Pemban inhabitants following more traditional/local beliefs, who go to the Island to cure the diseased.

It was clear that another approach was needed to raise awareness within the communities and make a difference for the environment. So, in 1999^{ix}, CARE International in Tanzania invited IFEES (Islamic Foundation for Ecology and Environmental Sciences, UK) to join the Zanzibar Commission for Natural Resources in a trial to use Islamic principles to promote the management of the Conservation Area. The Misali Ethics Project (a component of a broader project implemented by CARE to support the Conservation Area) was aimed at using Islamic beliefs to promote conservation. Initially only a few villages were selected for the dissemination of Islamic messages, but subsequently the approach was extended to twelve villages.

Some of the Qu'ranic principles used include the following concepts that promote sustainable resource use and a general human responsibility towards the natural world:

- **Khalifa:** the Arabic or Swahili term used to explain our responsibility as guardians/stewards of the world's environment;
- **Khalq:** reminds us of Allah's Creation and how we as human beings must respect it;
- **Insaan:** meaning human being and our ranking over and above other creatures and hence our responsibility to care for them;

^{viii} In particular, assistance was provided by the Environmental Development Group (EDG), a UK-based environmental consulting firm.

^{ix} During the first phase of the Misali Ethics programme

- **Mizaan:** meaning balance and the need to live in harmony with nature and other species;
- **Fassad:** meaning corruption to the environment and its creatures including trees, animals, and their ecological functions;
- **Amana:** meaning trust and the requirement of men and women to be trustworthy citizens of the earth.

...it is He (Allah) who produces gardens, both cultivated and wild, and palm trees and crops of diverse kinds and olives and pomegranates both similar and dissimilar. Eat of their fruits when they bear fruit and pay their dues on the day of their harvest, and do not be profligate. He does not love the profligate. (Qur'an, 6:142)

In cooperation with IFEEES, the Misali Ethics programme team organised an initial workshop that brought together religious leaders, government officials and the fishing community to discuss the teachings of the Qur'an on the environment and the use of natural resources, using an instruction manual entitled *Qur'an, Creation and Conservation*. The workshop was very successful and was followed up by more meetings where participants delved deeper into the Qur'an and how it pertains to the use of the environment. Various Qu'ranic verses and *hadiths* (the sayings and actions of Prophet Muhammad), and their relationship to environmental protection and conservation, were studied. As a result it was proposed that the future of Misali Island Marine Conservation Area would be based on the ethical principles laid down by the religion. There was even a suggestion that part of the area become a *hima*, a protected zone defined in Islamic jurisprudence.

Although to all intents and purposes Misali was regarded as a *hima*, the next step was to develop further and incorporate elements of the *hima* in terms of management style and responsibilities to key stakeholders. The conservation area is gazetted under the legislation of Zanzibar (part of the secular Republic of Tanzania), and there is a process in place to explore how to incorporate Islamic best practice for the environment into existing structures.

The main output of the Misali Ethics project was the idea to continue the environmental education of the communities by publishing and distributing a Guide Book for religious leaders, schools, and *madrassa* (Qu'ran school teachers). This has now been prepared and translated into Swahili. This new tool will be helpful in moving further forward with conservation and sustainable resource use not only for Misali Island, or even Zanzibar, but for Tanzania as a whole.

Interestingly, a baseline study at the outset of the project showed that only 34 per cent of fishermen thought that Islam related to their use of the sea and its resources. Later in the project another study was undertaken and this number had risen to 66 per cent, and some of the fishers were practising some specific conservation measures. It was also found that the lessons learned through the project had actually spread beyond the villages directly concerned²⁸¹.

The initiative (the only one from Africa) was celebrated during the Sacred Gifts to the Earth^x event in Kathmandu, 2000 – an international recognition and celebration of a conservation initiative by a major faith organised by WWF and ARC.

Today, there is much hope for the waters of Misali Island, with only the occasional case of illegal activities reported in Misali and nearby areas. Instead, the communities are trying to make ends meet through other means. Enterprise development services (including a credit and savings scheme) have been set up to help people start other businesses and develop other skills. Agricultural activities, bee keeping and handicrafts are some of the alternatives that are being exercised to supplement incomes.

^x Building on the success of 'Gifts to the Earth' WWF and the Alliance of Religions and Conservation (ARC) joined together to develop and recognise significant new conservation actions by the world's religions. These are called 'Sacred Gifts for a Living Planet' (Sacred Gifts).

Ecotourism is also being promoted at Misali Island, ensuring that the funds generated from visitation go towards the management of the area and support community projects.

Conclusions and lessons learned

Slowly but surely community awareness about careful natural resource use is filtering through to communities as they are reminded of their stewardship duties towards Allah's great Creation. One popular Muslim story told to highlight the importance of caring for the environment involves the instruction of Abu Bakr, the first Khalif of Islam, to his armies. He instructs them not to harm women, children, or the elderly, and at the same time he also orders them not to harm animals, destroy crops, or cut down trees: a clear message to respect the gifts of nature, which are indeed gifts of God.

The message here is simple. When the Holy Qur'an was used to remind people of their obligation towards nature conservation, everybody listened. It had an immediate impact where standard conservation tools and approaches were less successful. There was simply no better way of sensitising the local communities to environmental issues than through Islamic principles and their authority. As a result, the future looks much brighter for Misali Island. And hopefully lessons from this on-going Islamic ethics project will be learned elsewhere in Tanzania and used as a model in other parts of the world.



From left to right: Misali Island; Misali mangroves; Misali Visitor Centre

Sue Wells

St Catherine's area, Sinai, Egypt: Stephanie Mansourian²⁸²

Basic Data:

Declared: 1996

Total area: 575,000ha

Category: VI (World Heritage site since 2002)

Faiths: Judaism, Christianity, Islam

Background

The site is situated in Central Sinai, and includes Gebel Moussa, Gebel Katharina, Gebel Adir, Gebel Baab and Gebel Tarbush. The protected area itself encompasses the Saint Catherine monastery and extends over to the Wadi Thiran. Mount St Catherine is 2,624 m above sea-level and represents the highest peak in Egypt. The Sinai massif contains some of the world's oldest rocks; around 80 per cent of the rocks are 600 million years old.

The story of St Catherine, the daughter of a wealthy, noble family in Alexandria, is at the centre of the monastery, although links with Moses also make this site particularly important to Judaism. St Catherine is believed to have died a virgin martyr's death. She was beautiful, gracious and well-versed in poetry, philosophy, mathematics and languages. According to popular tradition, because of her strong Christian faith, she attempted to convert Emperor Maximinus at the beginning of the fourth century. While he refused to convert, he was amazed by her knowledge and culture. He sent a number of wisemen to try to shake her beliefs, but instead they all came back converted. The emperor then decided that Catherine was dangerous and should be put to death. On his orders, knife blades were attached to four wooden wheels, which were set to rotate in opposite directions. Instead of cutting Catherine to shreds, the wheels spun on their own and her flesh was not even scratched. At this, the emperor decreed that she should be beheaded, and his orders were carried out on 25 November 305.

Several different traditions relate to St Catherine's association with Sinai. Among them is the popular version that, five centuries after her death, a Sinai monk had a vision in which her body, uncorrupted by death, became radiant with light and was lifted by angels to a peak near Mount Sinai (subsequently known as Mount St. Catherine). When monks ascended the mountain in the ninth century, they found the intact body of the saint exuding, it was said, a sweet-smelling myrrh that was periodically collected in small bottles because it was believed to have healing properties. The martyrdom of St. Catherine and the news of her body being found in Sinai spread throughout Europe in the time of the Crusades.

Importance to religions

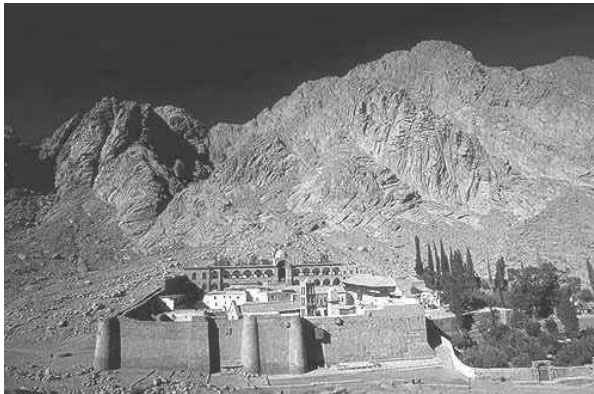
Mount Sinai, honoured by the three great monotheistic religions, rises behind the monastery and is bounded to the west by Wadi Al-Laja (Valley of Refuge), and to the east by Wadi Al- Deir (Valley of the Monastery).

- **Significance for Islam:** Mount Sinai (or Musa) also referred to as Gebel Musa, Mount Moses or the Mountain of Moses is important to Islam as it is considered the place where Muhammad's horse, Boraq, ascended to heaven. The square tomb of Nebi Salih, a 7th century companion of Muhammad, is located in the site. A mosque erected on the summit is visited by Muslims who celebrate Nabi Saleh in Wadi Al- Sheikh each year.
- **Significance for Judaism:** Mount Sinai is by tradition, where the Lord spoke to Moses and Moses spent 40 days and 40 nights carving the Law upon two tablets of stone.... "and the Lord came down upon Mount Sinai... and the Lord called Moses up to the top of the mountain and Moses went up" (Exodus 19:20).
- **Significance to Christianity:** Mount Sinai is where Christian refugees escaped from Roman persecution in the 3rd century AD. The first descriptions of the mountain were recorded by Etheria, a 5th century nun from Western Europe. In the 6th century the Byzantine Emperor Justinian officially founded a monastery near the foot of Gebel Musa (founded AD 527).

A monastery is situated on the summit on the site where the Emperor Justinian had erected St. Catherine's Monastery between 527 and 565, around what is thought to be the "Burning Bush" where God gave Moses the 10 Commandments. The original church was destroyed. The Chapel of the Burning Bush, the most sacred part of the monastery, is a small chamber that lies below and behind the altar of the church. The bramble bush, protected by a stone wall, is of a species not found in all of Sinai; it neither blooms nor gives any fruit. The surviving fortress-like monastery is mostly 14th century and is run by Greek Orthodox monks.

Protection

The protected area was founded as a wildlife reserve area when under Israeli occupation in 1977, then after it returned to Egypt in 1979, became protected under Egyptian law in 1980. Greater protection to the Saint Catherine's Mountain Reserve was given by the Ministry of State for Agriculture. In 1996 the St Catherine Protectorate was declared under the management of the Egyptian Environmental Affairs Agency (EEAA) and the commission of the European Union. It became a World Heritage Site in 2002, and a management and protection plan were then set by the ministry of culture, the Supreme Council of Antiquities (SCA), the governorate of South Sinai and the monastery authorities themselves.



St. Catherine's Monastery, Mount Sinai, Egypt

Courtesy of SacredSites.com

Protection rules include respecting the sanctity of the land; protecting its large variety of flora and fauna (some unique to Sinai); forbidding visitors from removing or interfering with animals, plants or rocks; and ensuring that people remove their litter or place it in the bins provided. Article 2 of Decree No. 473/82 states that hunting of birds and fish is prohibited and that the area must be managed by the Egyptian Wildlife Service. The South Sinai Governorate prohibited hunting of all kinds as of 1980.

The areas of South Sinai which are described on the World Heritage List encompass:

- The Monastery of St Catherine
- The Church of the Transfiguration,
- The Chapel of the Burning Bush
- The Mosque
- The Library, built between 1930 and 1942, which represents one of the richest monastic collections in the world, second in importance only to the Vatican. It contains more than 6,000 volumes and manuscripts, 3,000 of which are ancient, the bulk – more than 2,000 – in Greek, and hundreds of others in 12 languages including Arabic (some 700), Syriac, Armenian, Georgian, Coptic, Polish and Slavonic.
- The Icon Collection, the monastery's great artistic treasure. The most important single collection in the world, it includes more than 2,000 works, 150 of which are unique pieces dating from the fifth to the seventh centuries. The collection represents some of the finest Byzantine work and includes a large number of icons from the period of the iconoclasm (726-843), when the depiction of the saintly or divine form in art was considered heretical.

Biodiversity

This high altitude ecosystem supports a surprising diversity of wild species; some found nowhere else in the world. The area is rich in desert wildlife communities. The mammal species' list includes the nubian ibex (*Capra ibex nubiana*), the dorcas gazelle (*Gazella dorcas*), sand fox (*Vulpes rueppelli*), hyaena (*Hyaena hyaena*) and hyrax (*Procavia capensis syriaca*)²⁸³. The reserve is also a haven for the endangered slender-horned gazelle (*Gazella leptocerus*) and the Sinai leopard (*Panthera pardus jarvisi*) is reputed to still inhabit the region.

Around 1,000 plant species, representing almost 40 per cent of Egypt's total flora are found in this region. The montane vegetation consists of Irano-Turanian elements. Species include *Globularia arabica*, *Helianthemum lipii*, *Ephedra foliata*, *Gymnocarpus decander*, *Pyrethrum santolinoides*, *Retama raetams*, *Ephedra atata* and *Plantago sinaica*. On the northern slopes of Gebel Musa are scattered trees growing in rock crevices. Species include the cypress *Cupressus sempervirens*, the figs *Ficus carica rupestris* and *F. pseudosycomorus*, lentisc (*Pistaciakhinjuk*) and hawthorn (*Crataegus sinaica*). The dominant trees are represented by acacia (*Acacia raddiana*, *A. tortilis*) and tamarisk (*Tamarix gallica*). There are also some relict Mediterranean type plant species on the mountain peaks. Half of the 33 known Sinai endemics are found in St. Catherine. Many of these are rare and endangered. The White-crowned Black wheatear is very characteristic of the area. There are 46 reptile species, 15 of which are found nowhere else in Egypt, e.g. the endemic Sinai Banded Snake and the Innes Cobra, which is considered to be very vulnerable to extinction.

It is also an "important bird area" as defined by Birdlife International. At Saint Catherine's monastery there are many fan-tailed ravens (*Corvus rhipodurus*) and in the Wadi Lagah the Sinai rose finch (*Caprodaicus sinaicus*) is common. Other birds recorded include the Egyptian vulture (*Neophron percnopterus*), houbara bustard (*Chlamydotis undulata*), Arabian rock pigeon (*Columba livia*), desert lark (*Ammomanes deserti*), European cuckoo (*Cuculus canarus*), blackcap (*Sylvia atricapilla*), Sinai chukar (*Alecteris chukar*) and lesser whitethroat (*Sylvia curruca*).

Conclusions and lessons learnt

This is one of the few areas on the planet of great importance to all three major monotheistic religions. Management issues here have surprisingly not been complicated by this, with pilgrims from all three religions visiting the site regularly without any problems.

Problems remain in the area related to inadequate respect of the natural elements of the site (with poaching, water issues and grazing still being important issues). This may demonstrate the importance of the built up elements of the sacred site (i.e. the church and mosque) rather than the natural values of the site. Nonetheless, the very fact that a large area around the sacred core has been protected is important and it suggests the need to better integrate the values attributed to the sacred part of the site with those of the nature surrounding it.

Qadisha Valley and the Forest of the Cedars of God, Lebanon: Liza Higgins-Zogib²⁸⁴

Basic Data:

Declared: Al-Shouf Cedar Reserve created 1996; Qadisha Valley a Maronite Protected Environment 2003

Total area: Al-Shouf Cedar Reserve: 55'000 ha; Qadisha Valley: 646 ha

Category: Qadisha Valley and the Forest of the Cedars of God: World Heritage Site since 1998

Faith: Maronite Christian

Background

Towering above the Qadisha Valley the *Arz el Rab*, or Cedars of God, find their home – symbols of a country still fragile after twenty years of civil war. Just as the seedlings of the Cedars of God will take decades to grow strong and regain their former glory, so too it seems will the people of Lebanon. But the promise of a revived sacred forest and a formally protected landscape in Qadisha spells hope for the children of the *Arz el Rab*.

Importance to religions

Ouadi Qadisha, or Holy Valley, extends from Bcharré in northern Lebanon towards the Mediterranean at Tripoli. Otherwise known as the *Valley of the Saints*, its cultural importance for the world as one of Christianity's earliest monastic settlements has been recognised by UNESCO as a World Heritage Site. Hermitages, churches and monasteries cut into the craggy rocks scatter the valley and today, as in ancient times, the place is a living sacred site.

Bcharré is the crossroads between the Qadisha Valley and the infamous ancient cedar grove. It is perhaps no coincidence that Bcharré also happens to be the birthplace of Lebanon's most famous writer, Khalil Gibran. The Maronites also believe that it was at Bcharré (and not Mount Tabor) that the Transfiguration of Christ occurred^{xi}.

Well before the Christian era, the caves of Qadisha offered shelter for hermits. Then in the 7th century AD the caves were used again by Christian monks who came to lead ascetic lives in harmony with nature. Since then generations of religious seekers of differing confessions – from Nestorians, Monophysites, Chalcedonians and Monothelites^{xii} to Muslim Sufis – have found asylum in the cool of the Valley. It was here that in 1635 the Deir Mar Elisha monastery was built and saw the foundation of the Maronite Order of Lebanese monks, and it is here that twenty-two Maronite Patriarchs lived and were buried. The Valley of the Saints provided refuge to Maronites when they were being persecuted by the Ottomans, a natural sanctuary of rock and rugged forest and a difficult terrain for the uninitiated.

The Maronite Church, a branch of Roman Catholicism and today led by His Beatitude Cardinal Mar Nasrallah Boutros Sfeir, is the most popular form of Christianity in Lebanon. Founded in the 7th century by Syrian St Maron, the church has guarded its pivotal role in Lebanese society throughout the years and today it actually owns a lot of the land in Lebanon.^{xiii}

^{xi} Luke 9:28-36 - "And it came to pass about an eight days after these sayings, he took Peter and John and James, and went up into a mountain to pray. And as he prayed, the fashion of his countenance was altered, and his raiment [was] white [and] glistering. And, behold, there talked with him two men, which were Moses and Elias: Who appeared in glory, and spake of his decease which he should accomplish at Jerusalem. But Peter and they that were with him were heavy with sleep: and when they were awake, they saw his glory, and the two men that stood with him. And it came to pass, as they departed from him, Peter said unto Jesus, Master, it is good for us to be here: and let us make three tabernacles; one for thee, and one for Moses, and one for Elias: not knowing what he said. While he thus spake, there came a cloud, and overshadowed them: and they feared as they entered into the cloud. And there came a voice out of the cloud, saying, This is my beloved Son: hear him. And when the voice was past, Jesus was found alone. And they kept [it] close, and told no man in those days any of those things which they had seen."

^{xii} Nestorians, Monophysites, Chalcedonians, Monothelites – all various confessions that grew from controversies over the true nature of Christ.

^{xiii} No less than 77 per cent of the land in Lebanon belongs to faith groups. This highlights the critical importance of working with faiths for nature conservation in this country. The split is as follows: 49 per cent Maronite Church, 18 per cent Druze community, 10 per cent Hezbollah (Shi'ite Muslim organisation).

Protection

In many ways, the Qadisha Valley holds the history and very soul of the Maronite Church and therefore it is not surprising that the Church feels a hefty sense of responsibility to protect it from the many impeding issues that threaten its sanctity. Although most of the Valley is owned by the Church, five per cent is privately owned. Threats from development, roads, hotels and even nightclubs hover dangerously over this sacred space.

Just as the Holy Valley protected the Maronites in times of persecution, so it is now time for the Maronites to protect the Valley. In 2003, continuing their efforts towards nature protection, the Maronite Church pledged to make Qadisha Valley the second Maronite Protected Environment^{xiv}. In June 2003 meetings with the Government of Lebanon revealed a possibility to recognise both Harissa Forests (the first Maronite Protected Environment, Jounieh, north of Beirut) and the Qadisha Valley as National Reserves in a special legal agreement with the Maronite Church.

Today, in the spirit of St Maron we need to rediscover why God wishes His Church to care for nature, through education, teaching and preaching. In looking again at the life of St Maron and the thousands of hermits who sought Christ in the wilderness, in the forests and valleys, we believe we can become true believers by caring for all aspects of God's creation. (Qadisha Declaration, October 30, 2003)

In November 2003 Cardinal Sfeir presented the Qadisha Document to HRH Prince Philip, founder of the Alliance of Religions and Conservation (ARC) who, along with AFDC its Lebanese partner, have helped in the process. The Patriarch pledged also to continue working with the Lebanese government to ensure that the area is declared a National Park and obtains the full protection it deserves.

Biodiversity: Cedar of Lebanon: Sacred Tree in Danger

The righteous shall flourish like the palm tree: he shall grow like a cedar in Lebanon.
Psalms (ch. XCII, v. 12)

Before a variety of conservation and protection efforts were undertaken at different levels, the Cedar of Lebanon (*Cedrus libani*) featured on the World List of Threatened Trees as 'heavily threatened' in Lebanon. These are the giants oft-mentioned in the Bible and looked upon in veneration by the peoples of the Holy lands. Symbolising power and nobility, glory and might, the cedars were even used to evoke the image of Christ himself: *His countenance is as Lebanon, excellent as the cedars* (Song of Solomon 5:15)

Many religious myths also surround the Lebanese Cedar. One biblical myth recounts the tale of an angel who, during a storm, took shelter below a large cedar. The angel prayed to the Lord that this holy tree would bear fruit that would be useful to the human race. The prayer was answered and the fruit was the sacred body of Jesus Christ. Another tells of Seth, son of Adam, who planted a cutting from the 'tree of life' on the grave of his father. The cutting grew into a tree sporting three branches – one of cypress, one of olive, and the last of cedar. From this tree the cross was made on which Christ was crucified.

The godliness of the cedars, as well as their practical hardiness, meant that the ancient forests were a prized resource throughout history by the Assyrians, Babylonians, Persians and Phoenicians. The Egyptians too favoured the mighty cedar of Lebanon to build their ships (as did the Phoenicians and Venetians) and for building sarcophagi (cases for mummies). King Solomon, the third King of Israel, used it for his temple and other royal abodes in Jerusalem. It is said to have taken seven years of gruelling work to complete the temple and a further thirteen to build the King's private palace. Vast quantities of cedar wood were used to create such massive structures.

^{xiv} The first Maronite Protected Environment was the Harissa Forest, Jounieh, north of Beirut. This unprecedented action from Cardinal Sfeir was celebrated with WWF International and ARC (Alliance for Religions and Conservation) as a Sacred Gift for a Living Planet in 2000.

The cedar is also a political symbol for the people of Lebanon: ‘Monuments naturels les plus célèbres de l’univers’ (The most famous natural monuments in the world) according to Lamartine; and of course emblem of the Lebanese flag. The people of Lebanon, realising the gravity of the situation are eager to support reforestation efforts.

Lessons learned

Today the Cedars of God are small in number, and growing concern for them has incited serious conservation efforts to protect the last ancient trees and ensure the regeneration of the forest. Threats to the remaining trees persist, mainly from development and tourism. All the Cedar forests in Lebanon are now protected by law and are subject to different management and conservation initiatives.

In the Al Shouf Cedar Reserve at Barouk, only five per cent of it is cedar forest. But the most famous grove is to be found near Bcharré – the outset of the Qadisha Valley. At 1,950m some four hundred ancient survivors bless the slopes of Mount Lebanon. The twelve oldest trees are said to range from 1,000 – 2,500 years old, with the others ranging to 1,000 years old.

Efforts of the local NGO, Friends of the Cedars of God Committee, have succeeded in confining tourists to the trail that was built to reduce the negative impact of trampling on forest ground. In a bid to assist the natural regeneration this organisation is also producing cedar seedlings from seeds collected in the forest, and then planting them where they are most needed. Being beyond the natural ecological range of the cedar, the Cedars of God Forest survives only because of particular climatic conditions. Despite the negative impacts that man has imposed in the past, today the forest can only be maintained through the efforts of all the concerned stakeholders.

In the midst of this most ancient grove a chapel stands. Annually, in August, the Feast of the Cedars is celebrated here, when an elder of the Maronite church gives a blessing to the trees and prays for their continued protection.

The Lebanese forest covers around 135,000 ha, or 13.12 per cent of the land, with other woodland covering around 110,000 ha. Almost 25 per cent of the land therefore is covered by woody Mediterranean forest and scrub. The cedars count for only around 2,000 ha of that. The remaining cedars are the survivors of a sacred forest which once covered much of this small country, and with them are held the many mysterious secrets of a magical and tempestuous history. Efforts to protect them, like the Holy Qadisha Valley, are indispensable for a country that needs to take strength from the great symbol of the mighty Cedar of God.



Cedar of Lebanon (*Cedrus libani*), tree seedling. Although protection measures such as the creation of the Al-Shouf Cedar Nature Reserve have been undertaken, the Cedar woodlands of central Mount Lebanon are threatened by overgrazing, unregulated tourism, and a high occurrence of forest fires in forests below the slope.

© WWF-Canon / Michel Gunther

Periyar Tiger Reserve, Southern India: Liza Higgins-Zogib²⁸⁵

Basic data

Declared: 1978

Area: 77,700 ha

Category: II

Faith: Hinduism

Background

Sabarimala, one of Hinduism's most popular pilgrimage sites, is located within the boundaries of South India's Periyar Tiger Reserve. Each year millions of devotees come to worship Lord Ayappa, the forest god in his jungle abode. And the number is reportedly growing. The concentration of pilgrims to the park during the festival months of November to January already gives rise to considerable management challenges both for the park authorities and for the pilgrimage management board.

Periyar Tiger Reserve, nestled in India's undulating South Western Ghats, began with the construction of the Mullaperiyar Dam in 1895. It was formally gazetted as a Tiger Reserve in 1978, with the core area declared a National Park in 1982. The reserve performs a wide range of functions in addition to the conservation of biodiversity. A hugely important watershed area, the park provides irrigation and hydroelectric power for districts in Tamil Nadu^{xv}. Periyar's stunning landscapes of thick forest, shola grassland and mountain peaks, are home to a wide variety of flora and fauna including around forty tigers, a healthy elephant population, and a magnificent array of birdlife. As such it is also a favourite destination for local and foreign tourists. In addition, no less than six different indigenous groups, around 250,000 people, live on the fringes of the park, and many are largely dependent on its natural resources. But perhaps the principal attraction of the area is the Sabarimala temple. Millions of Hindus flock here from all over India every year to join the pilgrimage.

The spiritual significance of the site

Ayappa, who the devotees come to worship, was conceived of a rather strange union of Lord Shiva and Lord Vishnu. Legend has it that Lord Shiva brought the wrath of a Himalayan tribal chieftain upon him after seducing his wife. The chieftain, vowing revenge, retreated to the mountains to practice *tapas* (austerities) for a thousand years. He returned to seek out Lord Shiva with the awesome powers he had accumulated. So terrible was the chieftain's demon-like appearance that Lord Shiva called upon Lord Vishnu for help. Lord Vishnu assumed the form of a beautiful maiden, seduced the chieftain then killed him. Seeing the beautiful damsel (Vishnu in disguise) Shiva was enraptured by her beauty and made love to her. From this union, Ayappa was born. Lord Shiva instructed the boy Ayappa of his *dharma* (life-purpose) – to battle the demons of Kerala – and left him. He was brought up by a tribal king and performed his duty well. Once his dharma had been fulfilled, he disappeared into the inner sanctum of the temple upon Mount Sabari never to be seen again.

The pilgrimage itself, like all Hindu festivities, is a busy, colourful, and exciting event. Unlike most other big religious gatherings, however, the pilgrimage to Sabarimala is for men only. The reason for this is that Lord Ayappa is worshipped here in the form of a jungle ascetic, a celibate^{xvi} who spends his time in meditation and therefore it is believed that women devotees are not appropriate^{xvii}.

After forty-one days of penance and abstinence in preparation for the event, the devotees congregate for the long trek to the temple. Sounds of drums and horns fill the air and mingle with the energy of the pilgrims as they repeat the name of 'Swami Ayappa' and dance, eyes turned upward. It is said that as if by magic one brahmini kite (*Haliastur indus*) circles the temple to signal the start of the procession. The *Petta-thullal* procession celebrates the victory of Lord Ayappa over the demon Mahisi. This symbolises the possibility of defeating the demons within ourselves – hence the importance of the period of penance before and during the procession and the fact that the trek is done barefoot.

^{xv} Periyar straddles the border between Kerala and Tamil Nadu

^{xvi} Lord Ayappa is worshipped elsewhere (Achankovil) along with his consorts, Pushkala and Poorna

^{xvii} Girls and older women are admitted. Note that there are other Hindu festivities strictly for women only.

The first stage of the procession actually begins with a visit to the mosque in sign of alliance with the Muslim community, where even the elephants enter to receive the blessing from the Muslim dignitary. Then in slow procession, a steady line of pilgrims, each carrying a sacred *irumudi* (cloth bag) on their heads filled with coconuts, sandalwood paste, turmeric, and other *puja* (offerings) items, make their way to Ayappa's temple. Upon reaching the eighteen golden steps of the temple the pilgrims smash open their coconuts^{xviii} in celebration of the tiger-riding deity.



From left to right: Periyar Lake and landscape, Liza Zogib; Image of Lord Ayappa, courtesy of SacredSites.com; Shayana Pradikshanam devotional practice of pilgrims at Sabarimala, courtesy of SacredSites.com.

Conservation challenges

It is fitting that Lord Ayappa, the residing deity of Periyar's forests, should have the tiger as his *vahana* (vehicle) – a clear symbol of nature and spirit coming together. This reflects the vision of the park authorities, who realise that they must endeavour to conserve biodiversity while at the same time respecting the cultural and spiritual needs of those who live near to and who visit the reserve. This vision, however, is difficult to achieve with such a large annual event occurring in the park.

The estimated number of pilgrims who come to worship Lord Ayappa each year ranges from five to a massive fifty million, depending on who you talk to^{xix}. Whatever the case, such a density of visitation causes significant environmental damage and pushes 'visitor management' to the extreme. The problems caused by this influx include uncontrolled waste, infrastructure development, fire hazard, encroachment, pollution, and collection of forest resources. And in general rapid development of the area around the temple is causing considerable concern for park management. This has gone to such lengths that park management are worried that the area might become more of a concrete jungle than a real jungle, which they argue will spoil the magic of the area.

Not only pilgrims visit Sabarimala during festival season. Indeed many see this as a big business opportunity, and over a thousand outsider vendors also make the journey here each year, set up camp and make big profits from selling snacks and *puja* items to the pilgrims. Everything at this time, from accommodation to coconuts, is available at a high price. And additional pressure is thus exerted on the surrounding area.

This is a case where the two government agencies, park management and The Travancore Dewaswom Board (TDB – the government agency in charge of pilgrimage management), need to work closely together. However they admittedly have slightly differing objectives. The main objective of the reserve is to conserve biodiversity, while the principal aim of the TDB is to attract more pilgrims to Sabarimala and improve facilities and infrastructure. Continued tension exists between the two bodies and there is a clear need for enhanced inter-departmental coordination for protected area management.

^{xviii} The coconut is normally cracked open on the step corresponding to the number of pilgrimages already made. If it is the fourth pilgrimage the coconut would be smashed on the fourth step.

^{xix} Park management state that there are around five million pilgrims annually, according to an actual count carried out by the Forest Department, while the Travancore Dewaswom Board (TDB) insist that numbers are reaching fifty million.

The TDB is requesting more and more forest land to allow for a growing number of pilgrims – a demand which is met by hesitation from the reserve. Unwilling to sacrifice more land for clearance, park management argue that an unchecked growth of pilgrims to the area without careful management will undoubtedly mean more stress to the natural environment. In turn more stress to the environment will diminish the spiritual experience that is enhanced by trekking through pristine forest. However, also recognising the importance of the pilgrimage and the need for appropriate facilities and conditions, the Environment Ministry's National Board for Wildlife agreed in May 2005 a conditional transfer of 12.6 ha of forest land. In return the TDB has been asked to draw up a long-term plan for the management of Sabarimala shrine and the money paid for the land (9.5 lakh Rupees per ha) will go to an afforestation fund.

Despite the challenges, the managers of Periyar reserve are determined to find solutions that will accommodate everyone involved and meet their objective of a 'Green Pilgrimage'. Rising to the challenge, Eco-Development Committees have been set up to help with the management of the pilgrimage, providing for pilgrim needs and controlling facilities. One of their roles is to instruct the visiting pilgrims on how to behave in the forest, offering them a simple list of do's and don'ts that contributes to their own experience as well as protecting the natural home of Lord Ayappa. These committees have proved to be successful both for the pilgrimage and for the benefit of the local communities. Moreover, the TDB is no longer permitted to lease lands to outside vendors (apart from along one route), leaving the opportunity open for the communities, who in turn help manage the park.

Village Eco-Development schemes have proved highly successful, benefiting 5,540 families or around 40,000 people. The indigenous groups, heavily reliant on Park resources, have also been integrated into the Eco-Development programme through which they have been empowered to collect and market pepper. Consequently there has been a ten-fold increase in income to tribal families from pepper and tribal members now patrol the park along with the rangers. As a result of the Eco-Development Committee work, park management are proud to announce that around 200,000 trees are saved each year and that there has been around 70 per cent reduction of fuel wood collection. In 2002 the Eco-Development Committees at Sabarimala received the Indira Priyadarshini Vrukshamrithra Award for their efforts – the highest of its kind in the country.

So, while there are indisputably problems that come with the millions of pilgrims, there are also benefits. The revenue generated from pilgrim contributions to the Park Welfare Fund and from a tourist surcharge^{xx} goes to the Periyar Foundation^{xxi} – a semi-governmental trust mandated to support the park on conservation and livelihood issues. Together, the Fund and the Foundation deal with socio-economic concerns. These mechanisms, which are said to have the 'authority of government and the flexibility of a good NGO', enables more conservation work *and* provides for community welfare. Protection 'watchers' are funded, three tribal schools have been opened, base-camp development is underway to get rid of the concrete buildings, and the forests around the temple are being restored.

Lessons Learned

Many lessons are to be learned from Periyar Tiger Reserve and the management of one of India's biggest pilgrimages. The park's management have had the good foresight to see this challenge as an opportunity. They have realised that a balanced approach is required and that development of the area must be done with care because if not both the ecological integrity of the forests and the sanctity of the pilgrimage will be at stake.

Working together with the TDB, the Eco-Development Committees and local people, the park is striving to make this pilgrimage a green one, which will enhance the spiritual experience of the pilgrims, benefit the local communities, and protect the jungles in which Lord Ayappa still roams. Hopefully for years to come, wandering ascetics will continue to spot Lord Ayappa riding through the unspoiled forests of Periyar on the back of a majestic tiger.

^{xx} Although not at Sabarimala

^{xxi} The total revenue generated from ecotourism per year is 84 lakhs (Indian Rupees), which equals around US\$200'000

Eastern Himalayas (Sikkim and Arunachal Pradesh) Sacred Gumpa Forests: Liza Higgins-Zogib and Sudipto Chatterjee²⁸⁶

Background

In the Eastern Himalayan reaches of Sikkim and Arunachal Pradesh, many forest groves, preserved for their sacred values, contribute considerably to the protection of biodiversity. These forests of reverence, varying in size and appearance, are attached to the monasteries and known locally as *Gumpas*. The Lamas and monks of these monasteries are the venerable guardians of the sites.

Gumpa signifies ‘a solitary place’. A place where seekers of Nirvana can find retreat from the everyday troubles and temptations that cause the mind to wander from the ultimate goal; a place of natural serenity and purity. Nowhere could be more appropriate than at the heart of the forest. The forests within the Gumpas not only provide a peaceful surround, but are also a source of income for the monasteries. The monastery building itself is usually placed in a commanding position facing eastward to catch the first rays of the morning sun. It is built in parallel to the axis of the hills and, where possible, faces a lake. The entrance to the monastery is usually lined with prayer flags and *chhortens*, which represent departed souls. Each *chhorten* is built to symbolise the five elements unto which the body is offered at death (earth, water, fire, air, and ether).

Sikkim – the land of Happiness^{xxii}

Eighty-two per cent of Sikkim’s land area is forested. Soon after its establishment in 1909 the Sikkim Forest Department classified the forests into the following three categories:

1. Reserved Forest to be protected for its crucial ecological functions;
2. Khasmal Forest in the vicinity of villages where people would meet their timber and fuel wood requirements;
3. Gorucharan Forest to provide areas for cattle grazing and fodder collection.

Three further categories were also recognised, but which would not come under the direct administrative control of the Forest Department. These are Forests of the Kazis, Private forests of the Royal family and Gumpa Forests to be managed by the Lamas. While management decisions are left to the monasteries, for any clearance or construction on forest land, approval must be sought from the Forest Department in accordance with the Forest Conservation Act of 1927.

Sikkim is truly a sacred land and is the seat of the Kargyupa (Black Hat) sect of Buddhism. It is a land of Gumpas and many of the monasteries in the state have an adjoining sacred forest area. The boundaries of most of the Gumpas are not demarcated with fencing but instead flow into surrounding protected areas hence becoming important corridors. Studies reveal that they are mostly very well protected and that the use of resources within the forests varies between monasteries. While relatively little is known of the traditional laws that govern the forests and wildlife of these areas, it is known that Sikkim land laws are based on the word of Raja Me-long-dong, who dates from before the time of Buddha (914 BC).^{xxiii}

Under the mighty shadow of the Khangchendzongha mountain range, many monasteries sit quietly amongst their Gumpa forest groves and sacred lakes. Khangchendzongha itself is the most sacred natural feature of the area^{xxiv}, with its peak – third highest in the world^{xxv} – revered as the protective deity of the region. The Singhik Monastery for example has one of the most outstanding views of the holy mountain range. In western Sikkim, Dubdi, Sangacheolin, Tashiding and Ralang are all monasteries with sacred Gumpa forests. In this same region there are also two very sacred lakes: Yoksum and Khechupalri.

^{xxii} In the local language Sikkim means ‘the land of happiness’

^{xxiii} Gazetteer of Sikkim, Sikkim Science Society

^{xxiv} Kangchen = great snow, mDzod = treasure, Ina = five. The five peaks of the range represent the five hidden treasures of grain, weapons, salt, wealth, and *dharma*

^{xxv} Khangchendzongha, or Kanchenjunga, at 8585m is the third highest mountain in the world covering the space the size of Switzerland.

Yoksum lake is situated along the edge of Khangchendzongha National Park, the biggest protected area of the state. This is an area of thick broad leaved forests of oak, birch, maple, chestnut, magnolia, and silver fir, where deer, bear, langur, tahr, and the endangered red panda^{xxvi} and snow leopard make their home.

Not only is it a place of great biological significance, it is also of enormous cultural and historical importance. In 1642 three great Lamas (Gyalwa Lhabsum Namka Jigme, Gyalwa Lhatsum Chempo and Gyalwa Kathak Chemo) came from three directions for the coronation of the forest Lepcha-Bhutia king (Chogyal Phuntsong Nomgyal) on a hillock named Norgugong Charten. Four flat stone seats said to have been used for the auspicious event can be seen here.

Khechupalri Lake is another of the sacred lakes of Sikkim and perhaps the most highly revered. Also known as the wish-fulfilling lake^{xxvii}, pilgrims from all over come to pay homage. Again it is a place which sustains a wide range of biodiversity with well over 1,500 species of bird like the grey-headed fishing eagle (*ichthyophaga nana*) and the yellowbilled blue magpie (*Cissa flavirostris*). Mammals like the Himalayan black bear and jackal also frequent the lake.

According to Buddhist belief Khechupalri Lake was also a place where Tara Jetsum Dolma, the mother of Lord Buddha, once lived.

One of the most significant of Sikkim's annual festivals is held here at a monastery about 24 km from the lake. Visitors and pilgrims come from far and wide to witness this most eminent of rituals. On the night before the ceremony, pots filled with holy water from the sacred Rathang Chu river are brought to the monastery where various rites and prayers are performed and offered. Early the next morning the monks uncover the pots, which have been carefully studied. A dip in the water level forecasts an unfortunate year for Sikkim.

The sacredness of so many of the natural features of Sikkim has greatly contributed to nature conservation in the region. However, some problems persist. Water pollution is an issue and a recent threat to the Gumpa forests is the amplified cultivation of cardamom on forest floors to generate revenue for the monasteries. A rise in tourism and related problems is also cause for concern. WWF-India has initiated projects to work with the religious institutions and address some of these problems. They have also undertaken a detailed scientific study of water quality and biodiversity of Khechupalri Lake to help raise awareness of pollution amongst the local communities during the annual Bumchu festival^{xxviii}.

The role that monasteries play in the conservation of nature and natural resources in Sikkim should not be underestimated. The Buddhist Sangha is not simply a religious institution but historically one of social and political clout too. There are 330 monasteries in Sikkim and they have been widely instrumental in imparting environmental knowledge of protection and sustainable use to their followers.

At the Pemayangtse Monastery, Pelling, the chief executive of the monastery, Capt. Yapo Youngda summarises the words of Guru Rimpoche on rules for environmental protection:

- a) Do not displace large rocks or boulders in hills
- b) Do not stop the water of free flowing rivers
- c) The lakes are sacred and should be revered
- d) There should be no fish cultivation or offerings put into the lake
- e) Places of dense canopy are Sacred Groves that have hidden treasures. They must be protected by worshipping them and not extracting usufruct from them.

^{xxvi} The Red Panda is declared as the state animal of Sikkim.

^{xxvii} According to local belief Khechupalri Lake fulfils wishes and hence means wish-fulfilling lake.

^{xxviii} Annual festival attracting a large number of tourists and pilgrims and heightening pollution of the lake.

However influential the monastic institutions have been in the past, their influence seems to be slowly dwindling and, in parallel, environmental issues are mounting. Evidence of traditional societies breaking up is apparent; Tibet, once looked to for spiritual guidance, is no longer able to fulfil its holy duties; children are moving towards modern education, with English and Maths surpassing traditional studies; the long and often arduous journey of religious education is not finding favour with a modern youth; etc. The decline of monastic influence and unchecked development of certain areas has undoubtedly had a negative effect on the environment. Illegal felling of trees, encroachment into forest areas, pollution of rivers and lakes are just some of the consequences.

It makes sense therefore for organisations like WWF to engage actively with the monasteries of Sikkim to try to turn the situation around.

Arunachal Pradesh

In the state of Arunachal Pradesh there are also a number of sacred Gumpa forest groves and over 100 sacred lakes, concentrated mainly in the western districts of Tawang and West Kameng. Forest officials in Tawang report that out of 96 villages around 50 per cent have sacred groves. These Gumpas are said to provide a safe haven for a significant number of endangered medicinal plants^{xxix}.

Almost all of the 17 monasteries in Tawang preserve Gumpa forests for fuel wood and other purposes. These areas are normally well managed and pressure on them is minimal.

The Mompas and the Sherdukpens are two Buddhist clans from West Kameng. Much of their religion and cultural heritage is seeped in and preserved by the number of old Gumpas and chhortens in the region. In this regard it is just as important to protect these forest patches for their intangible (spiritual and cultural) values as for their importance to biodiversity.

In Arunachal Pradesh it is also important to note that apart from the Buddhist communities and their endeavours to preserve important areas of forest, the tribal peoples in the Apatani valley also conserve nature in their own way because of their religious beliefs. The Apatani people worship the Doni-Polo (the Sun and Moon God). They are famous for their efficient water use and irrigation methods in their terrace cultivation practices.

They own land either through family lineage, or the tenure is at a village or community level. Forests here are categorised as *Unclassed State Forests* and are well protected by taboos, rites, and strong traditional beliefs. In return the forests protect the cultural heritage of the tribes by reinforcing community bonds and providing a place of festivity and other essential social gatherings.

Recently in India the Wildlife Protection Act of 1972 was amended to include two new categories of protected areas, Community Reserves and Conservation Reserves. Now state governments can declare any private or community land not yet comprised within another formal protected area a Community Reserve for protecting fauna, flora, and traditional or cultural conservation values and practices. With the help of WWF-India, a Community Conservation Area has been recently established in Thembang village, where the villagers have agreed to protect a 3,000 ha area of forest. Local communities elsewhere have subsequently expressed an interest in establishing more of these Conservation Areas in the future.

Lessons Learned

The case of Sikkim and Arunachal Pradesh highlights the intrinsic relationship between nature and spirit, between the tangible and the intangible. The strengthening of one necessarily leads to the strengthening of the other. The decline of monastic influence in Sikkim for example has led to the degradation of nature, and the degradation of nature in turn destroys the sanctity of place.

^{xxix} Dr H. K. Haridasan, State Forest Research Institute, Itanagar

It has also underlined the crucial role played by places of spiritual significance in the conservation of biodiversity. The fact that an area does not have to be officially protected to be useful has been emphasised. But perhaps in a rapidly changing world with higher pressure on religions and on nature, other measures (like the Community Conservation Areas in Arunachal Pradesh) are necessary to preserve these significant areas of high spiritual and biodiversity value.

Working with monasteries and other religious and community groups seems to be critical for conservation organisations in order to protect the natural and spiritual heritage of these wonderful Eastern Himalayan states.



Burial platform in the trees (left) and ceremony at Khechupalri Lake.

Sudipto Chatterjee

Peak Wilderness Park, Sri Lanka: Stephanie Mansourian²⁸⁷

Basic Data

Declared: 1940

Size: 22,380 ha

Category: IV

Faiths: Islam, Buddhism, Hinduism, Christianity

Background

Sri Pada or Adam's peak is also known as: Mount Lanka, Ratnagiri (Mountain of Gems), Malayagiri or Mount Rohana in Sanskrit literature. This last name, like its Arab and Persian equivalent, Al Rohoun, is derived from the name of the south western district of Sri Lanka where Sri Pada is situated. In several Tamil works it is known as Svargarohanam (The Assent to Heaven) while the Portuguese called it Pico de Adam and the English, Adam's Peak. In the Mahavamsa, the great chronicle of Sri Lanka written in the 5th century AD, it is called Samantakuta (Samanta's Abode) while in modern Sinhalese it is often called Samanelakhanda (Saman's Mountain). The name Sri Pada, while correctly referring only to the sacred (sri) footprint (pada) on its summit, is the most commonly used name for the mountain today.

The Sri Pada mountain is situated 16 km north-east of Ratnapura on the island of Sri Lanka hugging the edge of the Central Highlands. It is part of the main watershed of Sri Lanka, from which the island's four largest rivers spring. For about six months of the year it is covered in clouds. The mountain was the landmark of the sea-faring Arabs, who came to Sri Lanka, to trade in gems, spices, ivory etc. When they arrived, they chose this site to praise God for having brought them across the Indian ocean safely.

The summit of the mountain is a small plateau, on which lies a huge boulder which contains the sacred mark of a footprint. This sacred footprint is covered by a small building made of wood. Inside, the foot mark is enclosed by a frame of copper fitted to its shape, and decorated with jewels. The footprint is gigantic, and seems partly natural and partly artificial. It is one of the few areas on the planet that has significance to Muslims, Buddhists, Hindus and Christians alike.

Those who live in the traditional villages, particularly on the southern fringe, extending from Hangarapitiya in the west and towards Erathna and Gilimale in the east, perceive the forest as a living organism full of spirits and divinities. They not only revere it for its spiritual values, but also derive significant livelihood benefits from the forest, including medicinal plants and food.

The mountain is rich in precious stones: rubies, topaz, garnets, cats eye, aquamarine, alexanderite and sapphires. Like the mountain itself many legends are told about these gems. The Arabs believed they were the crystallised tears that Adam and Eve shed when they were expelled from Paradise. For the Chinese, these gems were sprinkled onto earth by Buddha after his visit to Sri Lanka in order to bring wealth to the poor local population.

Sri Pada appears in various literary works. For example in the "Thousand and One Nights", written in Persia between the 9th and 13th centuries, it is written that it is one of the places that Sinbad visited. "I made, by way of devotion, a pilgrimage to the place where Adam was confined after his banishment from Paradise, and had curiosity to go to the top of the mountain". Legend has it that once a year, Sri Lanka's beautiful butterflies gather to go to Sri Pada to pay homage to the famous footprint.

Religious importance

According to religious belief, the real sacred footprint lies under the boulder, on a blue sapphire. To prevent it from sacrilegious profanation, god Sakra covered it with the boulder.

Long before Buddhism came to Sri Lanka in about 246 BC Sri Pada was revered as the home of a local mountain god called Samanta, or sometimes Saman or Sumana. The Theravada Buddhists of Sri Lanka later made Samanta the guardian of their land and their religion.

- **Importance to Christians:** Christian tradition has it that the footprint belongs to Adam who, after being expelled from the Garden of Eden for eating the forbidden fruit, fell upon earth in this very location, where he is believed to have stood on one foot for a thousand years, to expiate his sin committed against the Creator. This long ordeal left the print of his foot on the mountain. The first written Christian reference to Sri Pada is in the 2nd century Christian text, *Pistis Sophia*. Here it is written that Jesus informs Virgin Mary that he has appointed the angel Kalapataras as guardian over the mark “impressed by the foot of Adam and placed him in charge of the books of Adam written by Enoch in Paradise”.

Some also say that it is in fact St Thomas the Doubter’s footprint. The origin of this legend goes back to the Portuguese, who came to Sri Lanka in 1505. They held the belief that once St. Thomas the Doubter came to the Indian sub-continent, after baptising Gondophorus, the Indo-Parthian king, he ascended to heaven from Adam’s Peak after leaving his footmark on the mountain.

The famous explorer and Venetian merchant, Marco Polo ascended the mountain to pay homage to the glorious Foot of Adam, on his return from China in 1292. It was while in China that he had come to know about the sacred footmark from Kublai Khan, the first Emperor of the Yuan dynasty in China.

- **Importance to Islam:** In the tenth century, the peak was called “Baba Adam-Malai” or “Father Adam’s Mountain”. Since then it has become a place of pilgrimage for Muslims. They also believe that when Adam was cast out of Heaven, he fell onto Adam’s peak and stood there for a thousand years. Interestingly, a 14th century Persian poem says that Allah created all Sri Lanka's spices and flowers so that Adam’s transition from Paradise to earth would be less painful.

The first Muslim pilgrim to this site is believed to be Shaikh Abu Abdullah Khafif, who went there in the year 929 AD and who was buried there. Story has it that this Shaikh lived in Chilaw for many years and despite being a Muslim, earned the respect of the Buddhist Sinhalese. He is believed to have joined a Buddhist pilgrimage up to Sri Pada in which all members of the expedition were killed by elephants except for him. The reason for this was that, as they ran out of food, the Buddhists killed a baby elephant. They all ate some of the meat, except for the Shaikh who refused to touch the elephant. During the night, the rest of the herd of elephants sniffed all the pilgrims and killed the ones that they smelt had eaten the baby elephant, sparing only Shaikh Abu Abdullah Khafif. As a result, he was honoured by the local Buddhist population and to this day is revered as the “Great Shaikh”.

Other historical details show that Muslims were already making the pilgrimage to Sri Pada before the time of Abu Abdullah Khafif. Sulaiman, an Arab trader is known to have gone to Sri Pada in 850 and Al Qazwini who died in 1282 quotes a hadith of the Prophet which says: “The best spot where the camel knelt down is Mecca, thereafter this mosque of mine (i.e. Medina) and Al Aqsa Mosque (in Jerusalem) and the island of Sarandib where our father Adam had descended”. If this hadith is authentic it would show that Muslim reverence of Sri Pada began with the Prophet Mohammed himself.

- **Importance to Buddhism:** The peak is of prime importance to Buddhism. Buddhists believe that the footmark on the summit of Sri Pada is that of Buddha, who, during his third visit to Kelaniya, 2,580 years ago, purposefully left the imprint of his left foot for his followers. He did so at the kind request of the god Saman, the original deity of the mountain wilderness. The foot print was only discovered in 104 AD by King Valagambha who, having been driven from his throne, lived and hunted in the forest, where one day he discovered the sacred footprint. The gods revealed to him that it had been made by the Buddha.

The mountain peak has since become an important pilgrimage site with an extended network of Buddhist temples at the periphery. These are associated with villages who share the responsibility of providing religious services during the pilgrimage season.

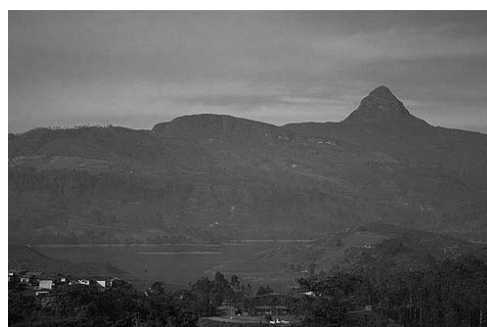
- **Importance to Hinduism:** The Hindus believe that the footmark belongs to Lord Shiva. The god is supposed to have settled on the summit to shed his divine light upon mankind. Hence they call the mountain “Shivanolipadam” (Foot of Shiva’s Light). Worshippers of god Shiva ascend the mountain to ask for divine intervention.

Pilgrims

The pilgrimage season, which mainly attracts Buddhists, to the holy mountain Sri Pada begins annually on the ‘Unduvap’ fullmoon day in December and ends on the ‘Vesak’ fullmoon day in May. Outside of this period, the statue of Sumaana Saman is brought down to where it is kept in Saman Devalaya in Palmadulla, and no one is allowed up to the peak. Approximately 2.5 million pilgrims make the trip each year.

Seetaganula (the torrent of icy water) is an important landmark en route to the summit. Here, the pilgrims, perform their ablutions and eat. They also pray to God Saman, and offer ‘panduru’ (a coin wrapped in a clean white cloth). Pilgrims try to reach the summit before dawn to view the rising sun, known as the ‘ira-sevaya’ which they believe to be the sun-god’s worship of the footprint. There is a huge brass lamp atop the mountain that keeps burning day and night, during the pilgrimage season, an offering made by king Wickremabahu III (1360-1375). Drops of oil from this lamp are taken by pilgrims for medicinal purposes.

On one side of the mountain just below the enclosure is a ledge covered by a roughly constructed shed. On arriving at the peak, groups of pilgrims enter this shed and wait in a posture of worship while a leader intones prayers and verses which the whole group repeat after him. Then they burn incense in front of the rock. After this ritual, pilgrims enter the small building that covers the sacred footprint and touch the rock with their foreheads. They leave offerings of food and money. A large bell can be found on the summit which every pilgrim rings, one toll for every pilgrimage he or she has made to the sacred mountain.



A Buddhist monk venerating the Holy Footprint on Adam's Peak, Sri Lanka (left). Adam's Peak, Sri Lanka.

Courtesy of SacredSites.com

Protection

Peak Wilderness is considered to be the most valuable conservation area in Sri Lanka, with the highest number of endemics, notably birds, reptiles and amphibians, on the island. Peak Wilderness is one of the few remaining areas in Sri Lanka with continuous tracts of altitudinally graded forest, ranging from lowland rain forest to high altitude cloud forest. Lowland forest is restricted to a few small areas on the lower slopes of the Peak Wilderness Range.

The continuous, 30-40m high canopy is interrupted in places by taller individual emergents rising to 60m. Dipterocarpaceae (Dipterocarpus, Shorea and endemic species of Doona) predominate, interspersed with representatives of the genera Cullenia, Mesua, Palaquium and Semicarpus. Because of a dense canopy there is little undergrowth. From 600m to 900m the lowland forest gradually gives way to montane rain forest, characterised by a lower canopy of Doona and *Stemonoporus rigidus* (rediscovered in 1981) with *Garcinia echinocarpa* and the vine *Leucocodon zeylanicum*.

Extensive marshland occurs on the plateau, together with stunted trees of *Syzygium revolutum* and *Gordonia speciosa* and shrubs such as *Hedyotis* spp. and *Osbeckia walkeri*. Typical marshland species include rush (*Juncus prismatocarpus*), sedges (*Scirpus fluitans*) and ferns (*Histiopteris* sp.). Characteristic flowering plants are *Impatiens* spp., *Exacum walkeri*, *Sonerila* spp., *Vernonia* spp., *Senecio ludens*, *Emilia glabra* and the orchid *Phalus tancarrvilleae*. A noteworthy shrub is the bushy *Schumacheria alnifolia*, endemic to Sri Lanka, which is host to the climbing *Freycinetia* spp.

Elephant (*Elephas maximus*) virtually disappeared from the region after coffee was established in the area in the mid 1800s but a remnant population, estimated at 30-50 individuals, apparently still survives in the sanctuary. Other mammals that can be found include Kelaart's long-clawed shrew (*Feroculus feroculus* – endemic to the montane regions of Sri Lanka), the endemic toque macaque (*Macaca sinica*), purple-faced langur (*Presbytis senex*) and the leopard (*Panthera pardus*). The contiguous areas of Peak Wilderness Sanctuary and Horton Plains Nature Reserve contain all 21 species of bird endemic to the country. One of the strongholds of the greatly endangered broad-billed roller (*Eurystomus orientalis*) is the southern periphery of the sanctuary, which is subject to cultivation.

Conclusions and lessons learnt

Locals feel a strong sense of commitment to the sacred mountain, even referring to it as “excellency” rather than simply a mountain! Nonetheless, commercial interest remains pervasive and there are encroachments. The main concerns are planting of exotic species (pine and eucalyptus plantations) and felling activities of the Forest Department, carried out in direct contravention of the Fauna and Flora Protection Ordinance. By comparison, encroachments by villagers are negligible. The annual pilgrimage to Adam's Peak, when thousands of tea stalls and shops are erected along the route, does however, cause considerable disturbance and results in the cutting of forest and significant waste. On the other hand, the fact that pilgrimages takes place for only half the year, does limit the damage. Gem mining activities have also disturbed the marshland habitat on the plateau and continue to be a problem.

The significance of this area appears to be largely due to the perfect shape of the mountain and its importance as a landmark, although clearly the presence of the foot mark has also led to rampant speculation by different religions. Adam's Peak Wilderness demonstrates the importance of cultural and ecological perspectives in the management of a sacred mountain forest. Cultural beliefs become conservation tools to ensure locally acceptable measures to manage the sacred landscape. Sri Lanka has expressed interest in listing Adam's Peak Wilderness Park as a World Heritage Site.

Qinling Sacred Mountain Ecology Project, China – Creating the Taibai Shan Black River Daoism and Ecology Training Centre: He Xiaoxin²⁸⁸

Introduction

Daoism has a unique sense of value in that it judges affluence by the number of different species. If all things in the universe grow well then a society is a community of affluence. If not, this kingdom is on the decline.^{xxx} If biodiversity equals prosperity as it does in a Daoist worldview, then our world is plummeting into poverty at an alarming rate.

The Qinling mountain range is where north and south China meet then disperse into their own worlds. It is a place of sacred mountains, noble rivers, and ancient cities. It is also home to around 20 per cent of the charismatic giant panda as well as a robust variety of other species.

It is here that a rather special conservation project has been developed by WWF-China and ARC (Alliance of Religions and Conservation) along with departments of the Chinese government, the China Daoist association, and local Daoist organisations. The *Qinling Sacred Mountain Ecology Project* is a conservation initiative based on Daoist teachings and practice. It contains three parts.

- **Part one:** recognition of the Qinling mountains as sacred ensuring that this understanding is at the heart of conservation plans;
- **Part two:** development of the Taibai Shan Black River Daoism and Ecology Training Centre in the sacred mountain of Taibai Shan, one of the mountains in the centre of the Qinling range;
- **Part three:** expand the project to include initiatives on other sacred mountains along the entire Qinling range.

The process of developing these initiatives is based upon the recognition that sacred mountains have very specific cultural and religious significance that in many respects defines the ecological understanding of them. This religious understanding in turn helps define the principles by which the sacred mountains are managed for ecological conservation.

Background

In April 2003 WWF-China co-launched the Panda Protection programme in Shaanxi province with the local government as an extension of long-standing efforts to conserve China's endangered giant panda population. Originally it was thought that a classic response of community-based programmes that raise awareness and in turn bring about changes in behaviour would suffice. But as the project developed, WWF-China realised that in addition to this and to any protection regulation that local or national government may introduce, other means were also needed to ensure its success.

With over one million tourists visiting the conservation area every year, WWF realised that it was as much about tapping into existing understandings of the area and of the sacred mountains in particular, as it was about introducing new conservation ideas. Many of the visitors come to the sacred mountains in an act of faith as well as simply to enjoy a vacation in beautiful natural surroundings. But WWF discovered that the conservation plan did not consider either the Daoist or Buddhist outlook and practices that had helped maintain the ecology of the mountains for centuries and which are still very much alive in many of the visitors. As a result, ARC was invited to explore the possibility of a joint ARC/WWF project to enhance the religious understanding within the conservation project. Following visits in November 2003 and February 2004, and the development of a joint paper, ARC's Trustees agreed to the project in May 2004.

Conservation Significance

The Qinling mountain range is the natural division between northern and southern China in terms of geography and climate, and the only area that acts as a water catchment for the country's two most important rivers: the Yangtze and the Yellow rivers. It is also the only water source for Xi'an, China's ancient capital during 13 dynasties, which today has a population of over seven million.

^{xxx} From the Daoist faith statement on the environment, 2003. The China Daoist Association, Beijing, China.

Because the climate varies so much between the different altitudes of the forests of Qinling Mountains, there is a huge variety of plants and animals. Many of the plants are rare and endangered, including the Ginkgo, one of the oldest tree species in the world. The Ginkgo tree (*Ginkgo biloba*) known for its healing properties^{xxxi} and ornamental beauty also has renowned religious significance. It is revered by Buddhists in China and Korea, and by followers of Shinto in Japan, and was hence planted as a temple tree in antiquity.

The Chinese Mountain Larch, the Miaotai Maple and the Chinese Fir are also highly endangered and therefore listed by the Chinese Government as protected species. And then there are the animals which include brilliantly coloured pheasants, giant salamanders, golden monkeys and of course, the world-famous giant pandas.

Taibai Shan mountain stands in the centre of the Qinling range, just south of the antique city of Xi'an, where the old Silk Routes began. It covers a huge expanse in the centre of the mountain range, and is venerated by both Buddhists and Daoists. It also lies within one of the protected areas (Taibai Shan National Nature Reserve) which are part of a growing network of areas set up specifically to conserve the threatened panda habitat.

Though best known as the site of the Terracotta Warriors, the Southern Taibai Shan region of the Qinling Mountains is just three hours outside Xi'an and is home to the world's densest panda population. This region covers a total area of 12,000 ha and includes part of the Taibai Shan National Nature Reserve, the Zhouzhi National Nature Reserve, the Laoxiancheng Nature Reserve, and the Xi'an Heihe Forest Park.

Creating the Taibai Shan Black River Daoism and Ecology Training Centre

Part two of the project is the plan to rebuild the historic Daoist monastery of Taibai Shan and to create an exhibition centre and training centre to demonstrate the harmonious relationship between Daoist teachings and nature in a bid to encourage sustainable eco-tourism and the development of professionally trained Daoist monks on the key sacred mountains of China. Using traditional building materials and architectural techniques, WWF-China has created an eco-tourism centre at the base of Taibai Shan, the peak of the Qinling mountain range, which has traditionally been considered as a place of Daoist dominance for over a thousand years. Next to the site stands a sacred tree, as well as the remains of an ancient Daoist temple that was destroyed during China's Cultural Revolution of 1966-1974. Even so, many people still go to this site for spiritual comfort.

Impressed and inspired by the devoutness of the pilgrims and the power of religious belief ARC, in collaboration with the local Daoists, is rebuilding the temple using the Daoist tradition of eco-building (i.e. using sustainable local materials and methods). The result will be China's first religious ecological training centre, which will have the following aims:

- Rebuilding the temple to serve as a model of eco-architecture, using traditional and sustainable materials;
- Building an exhibition centre for visitors and monks;
- Creating a Daoist Ecology centre in the rebuilt temple;
- Developing educational resources for Daoists, pilgrims, and visitors.

Between September 2004 and April 2005 (outside the main tourist period), WWF made available their eco-tourism facilities to the Daoist monks, nuns, priests and laypeople. At the same time, the Daoist academy at Louguantai monastery worked with ARC to design and create training programmes to demonstrate the harmonious relationship between Daoist teachings and nature conservation.

The China Daoism Association and its local branch, the Louguantai Daoist Association, have agreed to organise regular training programmes for local people, tourists, the Daoist priests. The practical implementation of this is currently under discussion.

^{xxxi} Known to traditional Chinese doctors as 'the memory tree', its leaves contain a compound that stimulates brain activity.

Other activities include developing educational materials and posters on Daoism and conservation together with the Shaanxi Daoist Association (at the provincial level) and the Louguantai Daoist Association (at the country level). Discussions with these organisations are also on-going regarding the future use of the educational material and the management and use of the cultural exhibition centre and museum.

The Taibai Shan Daoist ecology temple should be completed by 2006 and ARC plans to launch and celebrate it in association with The Ecological Management Foundation, the Daoist Association of China, the Government of Shaanxi, and WWF-China. It is hoped that the launch will have the following effects:

- Facilitate the completion of the initial programme;
- Enhance future use and management of the rebuilt Daoist culture centre;
- Deepen the relationships between ARC, WWF-China, departments of the Chinese government, the China Daoist association and other local Daoist organisations;
- Discuss further development of the initiative, including the possibility to celebrate it as a Sacred Gift to the Earth.



Model of the Daoist temple to be built at Taibai Shan

ARC

Further development of this initiative is planned for the future (part three) in order to look at other sacred mountains of the Qinling range. These sacred mountains include Maiji Shan to the west of the range (sacred Buddhist mountains with great Buddhist grottos), moving eastward to the central area of the aforementioned Taibai Shan (sacred Daoist mountain), Louguantai (sacred Daoist site where the Dao De Jing book of Lao Zi was written), and Hua Shan (Daoism's western Sacred Mountain) at the far eastern end of the range. Other sacred mountains such as Li Shan, Zhongnan Shan and Tiantai mountains will also see initiatives developed in the third and perhaps fourth parts of the project.

One of the first research projects undertaken by ARC in the mid 1990s was on the role of Daoism as a protector of the ecology of its traditional sacred mountains. Working with the China Daoist Association, all five main sacred mountains were surveyed and management programmes developed for two of them – Hua Shan and Tai Shan. It was shown that when Daoists were in residence on a sacred mountain, the environment was better protected than when there were no monks. Over the past ten years, ARC and partners have been able to help protect the mountains from inappropriate development as well as create management plans in which the Daoists are active partners and participants. The initiative discussed in this study provides an opportunity to build on past successes.

Bogd Khan Mountain Strictly Protected Area, Mongolia: Stephanie Mansourian²⁸⁹

Basic Data:

Declared: 1778 then re-established in 1978

Total area: 41,651 ha

Category: 1a

Faith: Buddhism

Background

Bogd Khan Mountain is Mongolia's oldest Buddhist protected area and one of the world's oldest protected areas. It dates back to the 12th century, and is the site where hunting bans were first introduced 800 years ago under Chingis Khaan. Numerous archaeological sites have been discovered in the Bogd Khan strictly protected area, including cave paintings that archaeologists date to three thousand years ago.

Religious significance

In Mongolia over 600 mountains and other natural sites are venerated by local Buddhists. Three mountains have been designated officially by the state as "sacred mountains": Khan Khentii, Otgontenger and Bogd Khan Khaikhan. This designation dates back to the first governors of the state of Mongolia, during Khunnu times. Official documents dating back to 1294 already mention Bogd Khan mountain as a natural reserve.

In 1709 a law, called "Khalkh Juram" proclaimed Khentii Khan and Bogd Khan as mountain reserves. Later, in 1778, as a result of King Uyндendorj's efforts, Bogd Khan, Khan Khentii and Otgontenger mountains were also officially declared mountain reserves, and the decision was made to worship them every year. The statement was expressed in the following words: "Old regulations from all provinces should be followed when celebrating a worship ceremony of the heaven, the land, old temples, the god of land, the god of plantation". In addition, issues related to ceremonial procedures, such as the state's participation in the ceremony and expenditure, were set out clearly in the law.

The highest point in the protected area, Tsetseegun mountain (2,268 metres), is one of four holy peaks that surround Ulaanbaatar, the capital of Mongolia. The deity associated with Bogd Khan is called Dunjingarav who rides thirty-three grey horses (a symbol of shamanism) and has the mantra (a ritual originating in Buddhism) "um ma hum". Because both the horse and the mantra symbols are present, this shows the evolution from shamanism to Buddhism and their complementarities.

Rituals and practices are centred around sacred mounds called *ovoos*, each of which is considered the home of an ancestral spirit. A wooden stick with *Kadakhs* tied around it (long, narrow bands of silk presented to someone or something as the symbol of the god) is placed on the top of the *ovoo*. Four stones are put on four sides of the *ovoo* to burn incense on. The most important guest is seated at the northwest side of the *ovoo*. Then a fire is lit near the *ovoo* and people participating in a ceremony offer meat, dairy products, vodka, and *airag* (fermented mare's milk) to the *ovoo*. The incense is burnt, and then a sutra specific to the mountain is recited.

Biodiversity

Since 1990, a new time of social change, it has become possible to revive national traditions and customs of nature protection in Mongolia, and to incorporate these traditions and customs into state policy. On 16 May 1995, the first President of Mongolia issued a new decree "supporting initiatives to revive the tradition of worshipping Bogd Khan Khaikhan, Khan Khentii and Otgontenger mountains".

This period has also marked a renewed commitment to wildlife conservation through the establishment of a network of protected areas based upon principles of landscape ecology. In 1992, the Mongolian Parliament, or "Ikh Khural", adopted a goal of placing 30 per cent of the nation under some form of protected status. Since that time, Mongolia has rapidly increased the number and area of protected

areas. In 1993, the Government formed a Protected Areas Bureau to manage the growing network of parks.

One year later, the Mongolian Parliament passed a new “Protected Areas Law”. This law recognises four primary categories of protected areas in Mongolia: Special Protected Areas, National Parks, Nature Reserves, and Monuments. Sub-categories include “Nature Reserves” designated as Ecological, Biological, Paleontological or Geological Reserves and “National Historical Monuments” designated as Natural Monuments or Historical and Cultural Monuments.



Larch trees in the forest steppe. Bogdkhan Mountain Strictly Protected Area, a holy site, is Mongolia's oldest nature reserve. Located on the southern edge of Ulaanbaatar, Mongolia's largest city, the protected area encompasses the beautiful Bogd Uul mountains. Mongolia.

© WWF-Canon / Hartmut Jungius

Conclusions and lessons learnt

ARC and the World Bank have sponsored several events and infrastructure development to support the site and have produced a book on sacred sites in Mongolia²⁹⁰. Community involvement in protected area management is still limited and persons living in or near protected areas are frequently alienated from their management. Good sites in the valley are being sold off for development. Community support for the protected areas network would likely be fostered through creative community based natural resource management programmes that link conservation with benefits.

In this case while the protected area has religious significance, it is actually strictly protected. This is a cause for conflict between biodiversity conservation and rituals of importance to local communities. It would appear that attempts to fit into the strict American model of protected areas have caused friction in this country where traditional uses of natural areas are very important to local people.

The Way of Saint James, Europe: Josep Mallarach

Basic Data

Declared: 1993

Category: World Heritage Site (including several protected areas)

Faith: Christianity

Background

The Way of Saint James is the longest and oldest living pilgrimage route of Europe. It is named after the shrine of Santiago de Compostela, a name which literally means Saint James (San Yago) of the Field of Stars (Campus Stella). Santiago is located near the Cape Fisterra / Finisterre (i.e. the end of the land) in Galicia, northwestern Spain. The Way has experienced a significant revival during the last decades, blending spirituality, culture, nature and sport in a unique manner. A large number of private and public organizations as well as public administrations are currently involved in the study, restoration and protection of the Way of Saint James, and many formal and informal arrangements have been set up, mainly in Northern Spain, to conserve and restore both the cultural and the natural heritage related to it. In 1987, the Council of Europe declared the Way of Saint James the first European Cultural Itinerary. In 1993, it became the first pathway of the world to be declared a World Heritage Site by UNESCO.

Depending on the linguistic region it crosses, the Way of Saint James receives different names, of the most important: Camino de Santiago (Spanish), Ruta Xacobeá (Galician and Portuguese), Chemin Saint Jacques (French), and Done Jakueren Bidea (Basque).

History and significance of the Way of Saint James to Christianity

Saint James, one of the twelve apostles of Jesus, who was named, together with his brother, ‘Son of Thunder’, is said to have evangelised Hispania, a province of the Roman Empire at that time. According to legend, after his death in Palestine, the body of Saint James was miraculously transported by sea to Iria Flavia, a small seaport of northwestern Hispania, where it was buried and forgotten for several centuries. Another tradition states that early in the 9th century a star appeared, pointing out the location of the grave to some shepherds. After some miracles that were attributed to him, Saint James was declared the patron of the small kingdom of Asturias, cradle of the future kingdom of Castile, and, centuries later, of Spain. Around the shrine, grew the old town of Santiago de Compostela at the turn of the first millennium.

The take over of the ephemeral Christian kingdom of Jerusalem by Muslim armies in 1078, almost put an end to Christian pilgrimages to the Holy Land. As a result, Saint James of Compostela, sponsored by the influential Citeaux monastic order, became, with Rome, the most important alternative centre of pilgrimage of Western Europe, being visited by a continuous flow of European pilgrims, especially during the 11th-14th centuries.

Along the main routes to Santiago, thousands of monasteries, temples, hospitals, inns, and shelters of great interest were built and thrived for centuries, most of them up to the present time. During the 12th century, over ten thousand monks and members of chivalry orders were devoted to protect pilgrims, providing for their basic needs. The spiritual and cultural significance of the Way of Saint James has been recognised as enormous for Europe during the Medieval Ages. During the 17th century the flow of pilgrims began to decline, reaching its minimum during the late 19th century, when most pathways were abandoned. However, in the 1950s, recovery efforts began in Galicia, and since then have been rapidly increasing, as has the number of pilgrims and other users of the Way.

The origins of this sacred site and its pilgrimages seem to be far older than Christianity, as demonstrated by the continuity of five millennia old petroglyphs up to the very stones of the medieval cathedral of Santiago. It has been proven that the same site was already a pilgrimage centre during the megalithic civilisation.

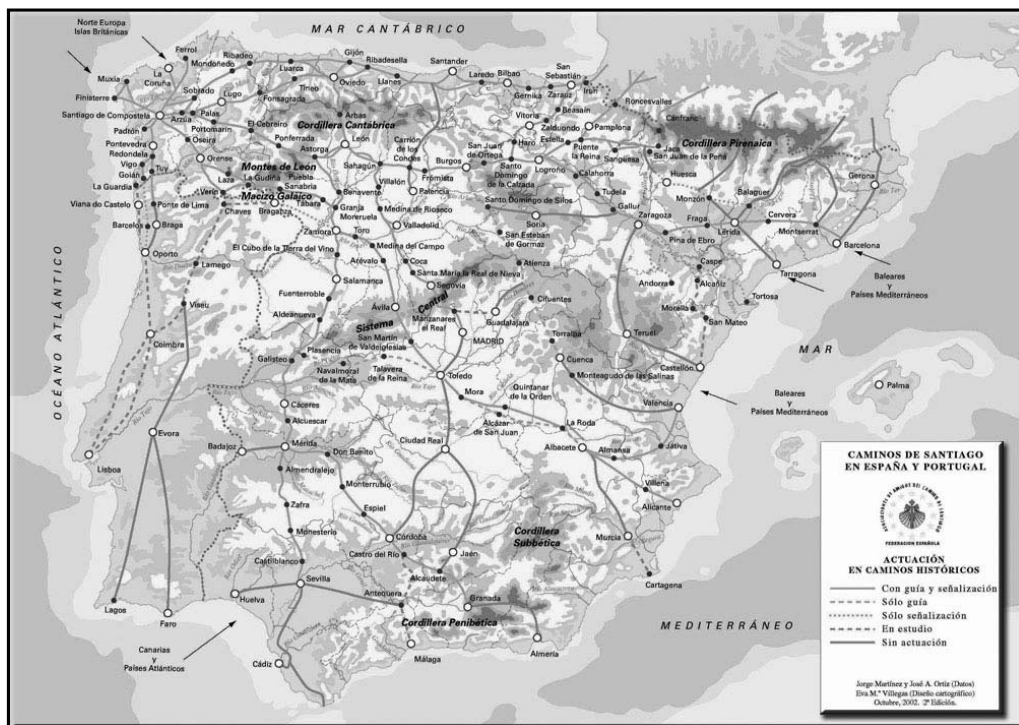
Compostela, near the end of the earthy reflection of the Milky Way in the European continent, would be, therefore, one more example of an outstanding sacred site being recognised as such by successive prehistoric spiritual traditions, until its final integration in a historic mainstream religion –Christianity in this case.

Description of the Ways

Actually, there is not a single route to Saint James, but a number of different pathways, departing from different locations of Spain, France and Portugal. The most important routes are those that cross the Western Pyrenees mountains following northern Spain, from Navarre to Galicia, in two main branches, called the Northern and the Southern Ways. The total length of each of these ways can vary from 750 to 2000 km, depending on where they begin. The Spanish network of routes to Saint James has a total length of over 5000 km, although only half of them have been signposted. Nowadays not all pilgrims or hikers follow an entire Way, but some do it by foot, bicycle or horseback, either in one go or by sections, over consecutive years.

The Northern Way, enters Spain by Irun, and follows the Atlantic coast to Donostia/San Sebastian, and then Santander until Gijón. From there, the Way turns southwest to Oviedo, Cangas de Narcea, Lugo and Palas de Rei. The Southern Way, also called the French way, was the main historic route. It crosses the Pyrenees by Roncesvalles going southwest to Pamplona / Iruña, Estella and Logroño. From there, it goes westwards to Burgos, San Domingo de la Calzada, León, Astorga, Villafranca del Bierzo, Samos, and Palas de Rei. From Roncesvalles to Santiago is about 800 km. Both ways collide either at Melide or Palas de Rei, from where they go to Santiago in the last four days of the walk. The Spanish portions of these two Ways of Saint James, which are well signposted and equipped with facilities, can be followed in four to seven weeks by foot, and less than half this time by bike. The French Way has facilities adapted to the needs of those that go on horseback.

Other Ways of Saint James that have guides and are signposted include the Way of Silver (Vía de la Plata) that departs from Sevilla or Granada, in southern Spain, as well as those departing from Barcelona, Alicante or Valencia, along the Mediterranean coast. The shortest way is called the English Way, since it departs from the two harbours that are closer to Santiago: El Ferrol and La Coruña.



Natural Protected Areas related to the Ways

In Spain, nature conservation is almost completely decentralised, with responsibility lying with each Autonomous (regional) government. The Spanish portion of the two main Ways of Saint James crosses six Autonomous Communities: Galicia, Asturias, Cantabria, Castile-Lion, Basque Country, and Navarre. Secondary branches of the Way include other regions, such as Aragon, Catalonia, Castile –La Mancha, Andalusia, etc. In all of these regions there are projects to integrate the Ways of Saint James to natural heritage or landscape protection schemes, of different scope and stages of execution. Curiously, the secondary pathways, those that were used in Medieval times only in cases of trouble (since they avoided the main cities), currently have an additional interest for modern visitors, because they go across natural areas, which often are of high quality. Therefore, regional and local authorities or NGOs involved in nature conservation are usually more interested in the old ancillary ways, whereas agencies and organizations working to preserve cultural heritage are usually more interested in the main historical ways.

In Spain, the efforts to restore the Ways of Saint James have been paralleled with the decentralisation process and the declaration of most protected areas by the regional governments, since the mid 1980s. Currently, there are a large number of protected areas which are physically related to the Ways of Saint James, and their visit is suggested to pilgrims and hikers by most published guides. Although many of these protected areas have been established, or proposed, based on natural heritage values (such as those areas included in the Natura 2000 network) there is a growing number that aim to protect and restore –when needed – both natural and cultural heritage values, usually as Nature Parks (which in Spain are equivalent to the IUCN category V) and Special Plans (Plan Especial) a flexible legal figure used to protect and restore both natural and cultural heritage values.

One of the best examples of these types of synergies is found in Cantabria, on the Atlantic coast. There have been five consecutive declarations of Biosphere Reserves, established over nearby existing protected areas, mainly Nature and National parks: Muniellos (2000), Somiedo (2000), Redes (2001), Picos de Europa (2003) and Babia (2004), which constitute the Great Biosphere Reserve of the Cantabric Mountains, the largest Biosphere Reserve of Spain. Its purpose is to be “an instrument to coordinate this area with its cultural and biological values, in an integrated manner based on the Way of Saint James, a structural element, linking the Cantabric mountains with Europe”.

During the last decade several regional rules have been passed to protect portions of the Ways of Saint James and its surroundings. A good example is the Law of protection of the Ways of Saint James of Galicia (1996), which provides protection for all cultural elements associated to the Ways in this region, as well as trees and other landscape features in an area 60m wide along the pathway.

Another type of protection approach relies on specific plans aimed to conserve and restore the Ways of Saint James, including not only the pathway itself, but all the historic monuments, bridges, lookouts, shelters, and resting places related to it. Those types of plans (Planes Especiales or Planes Directores) have been set up in many portions of the Way in Spain. A good example of them is the ‘Plan director del Camino de Santiago’ promoted by the Diputación Foral de Álava, which encompasses the route that connects the North and the South Ways to Saint James. This section of the Way is linked to several greenways, as well as to a selection of the best landscapes of the province of Álava, that had been proposed to be protected based on the principles of the European Convention on Landscapes.

Cultural and natural values are closely interrelated on most Ways. Most routes to Saint James are literally filled with hundreds of outstanding historic and cultural monuments, which are often located in areas of outstanding beauty. The Old town of Santiago, with its Romanesque, Gothic and Baroque buildings, gardens and courtyards is considered one of the world’s most beautiful urban areas, and was declared a World Heritage Site in 1985.

Recovery and revival of the Ways of Saint James and its effects on the environment

In the Middle Ages people made the pilgrimage out of religious zeal, no doubt, although those engaged in faith-related organizations could have, in addition, deeper reasons. Nowadays, with the weakening of

Christianity in Western Europe, and the coexistence of other Faiths, motivations for people from all Faiths, to walk hundreds of kilometres to the presumed resting place of Saint James are more diverse. Faith is still a major component for pilgrims, although it can have more nuances. Motivations such as reaction against our overindulging society, an escape from an unhappy, boring day-to-day existence, contact with nature, and a possibility to rediscover one's inner self, are often quoted. Recently, there have been Christian friars that have organised pilgrimages to what they call the 'Way of life' to help young people coming from prisons in their healing process.

People willing to take the Way by foot or horseback (lately bicycle has been added as another acceptable option) for many days, even for several weeks, usually have good attitudes towards natural and cultural values. Therefore, conflicts with them are, very limited. Indeed, pilgrims and ecotourists alike constitute a powerful conservationist force against ill-conceived development projects that contribute to the deterioration of the ancient pathways to Saint James, as well as the cultural, historic and landscape heritage associated with them.

The first known guide of the Way of Saint James, the *Liber sancti Iacobi* –or *Liber peregrinationis*, was written by Aimery Picaud, a monk from the ancient kingdom of Aquitany, eight centuries ago. Since then, particularly during the last decades, a large number of guides have been published in many different languages to serve those who, from all over the world, wish to prepare themselves to take the Way of Saint James^{xxxii}.

Those who take the Pilgrim's Way *bona fide*, i.e. for spiritual reasons, can obtain a personal certificate of pilgrimage (Credencial), which allows them to stay overnight in shelters along the way, in Spain, either for free or for a modest amount. At the end, in Santiago, they can obtain a special certificate, issued by the "Cabildo" of the Cathedral, written in Latin, named "Compostela" which states that they have done the pilgrimage '*pietatis causa*' (because of piety).

A common inner aspiration to most people taking the Pilgrim's Way to Saint James is that, for one reason or another, they will become somewhat better or healthier, either at the physical, psychological, and/or spiritual level. The Way provides a closer relationship with outstanding protected natural areas, significant sacred sites, and centres of spiritual and cultural heritage, as well as close contacts with people from all strands of life, which usually produces, or reinforces, a more conscious and respectful attitude towards the universal values of our common heritage.



Cathedral of Santiago de Compostela, Spain.

Courtesy of SacredSites.com

^{xxxii} A selection of those guides can be found in the suggested web sites. <http://www.caminosantiago.com/> includes information about art, history, natural areas, pilgrims forum, restaurants, transportation, advice for those going on bicycle or horseback, etc., available in Spanish, French, English and Italian; <http://www.caminosantiago.org/> site of the Spanish Federation of Associations of Friends of the Way of Saint James (Federación Española de Asociaciones de Amigos del Camino de Santiago) It includes a lot of useful references: detailed maps, books, journals, shelters, virtual guide, useful links, etc., and features the Spanish journal "Peregrino", which is available in electronic format since 1987. ; <http://membres.lycos.fr/ultreia/chemin/assojacq.htm> site of the French Associations of Friends of Saint James; <http://dspace.dial.pipex.com/telegraph/04camino/040009d1.htm> includes a complete list of book reviews, maps and guides about the Pilgrim's Way to Saint James, all in English.; <http://www.efdeportes.com/efd87/camino.htm> a well documented site about the revitalization of the Ways of Saint James as a modern long route for ecotourism, hikers, bikers, etc. (only in Spanish.)

Northern Karelian Biosphere Reserve, Finland: Stephanie Mansourian²⁹¹

Basic Data:

Declared: 1992

Total area: 350,000 ha

Core area: 14,200 ha.

Category: Man and Biosphere reserve.

Faith: Christian (Orthodox)

Background

The North Karelian Biosphere Reserve is situated north-east of Joensuu at the border between Finland and Russia. It is a generally flat landscape with some forested moraine hills (called 'vaara'), glacio-fluvial formations, mires, peat lands and lakes. The area is predominantly covered in coniferous forest and can be divided into dry and moist heath forest. The whole region is only sparsely populated with about 2,320 people living in the transition area of the biosphere reserve.

The biosphere reserve contains four core areas: Petkeljärvi National Park, Patvinsuo National Park, Koivusuo Strict Nature Reserve and Kesonsuo Nature Reserve with abundant old-growth forests. The Lake Hietajärvi area in the northern part of Patvinsuo National Park is one of Finland's four environmental research areas.

Starting in the 13th century both Russia and Sweden were vying for Karelia and the history of the region was shaped by many wars and conflicts.

The western part of Karelia came under Swedish rule in 1293 -1295. In 1322 a peace treaty was finally signed between Sweden and Novgorod. Sweden obtained western Karelia with the Karelian Isthmus; and Novgorod was left with Ingria, Ladoga Karelia and East Karelia. In 1809 the whole of Finland became part of the Russian Empire as an autonomous Grand Duchy. During World War II Eastern Karelia was occupied by Finland and at the end of the war, the Finnish remains of the Province of Viipuri were made into the "Province of Kymi". In 1997 the Kymi province was incorporated with the province of Southern Finland.

Western Karelia shows influences from the Lutheran Swedes, but Eastern Karelia is quite distinct and significantly influenced by the Russian Orthodox Church. While this sparsely populated area (2,320 people) is still closely intertwined with the Orthodox religion, remnants of traditional cults and rituals can still be witnessed, interspersed with the Christian faith.

Importance to religion

Orthodox church in Finland

Because of its location, northern Karelia witnessed numerous struggles for power between the Swedes, Russians and Finns but also between the Orthodox, Lutheran and Catholic churches.

The Orthodox faith is the oldest Christian faith and arrived in Finland over 1000 years ago from Russia. The founding of monasteries on the islands of Lake Ladoga contributed significantly to the spreading and establishment of the Orthodox faith in eastern Finland. There are various sacred places in the North Karelia biosphere reserve, most of which are Orthodox monasteries, although some sites remain from old pagan rituals.

Chief among the monasteries is Valamo, believed to have been founded by a Greek-born monk named Serge and his younger assistant Herman. The monastery became entirely Finnish in the late 1970s and adopted Finnish as its principal language for communication and worship.

Konevitsa was also an important monastery, founded by Arseni, another Greek monk, in the late 14th century. It was through the missionary zeal of the monasteries of Lake Ladoga that the Orthodox Church gained a foothold in eastern Finland and Karelia. Churches were built in villages, and several

tiny wilderness monasteries were founded literally in the middle of nowhere. In the 16th century, the Orthodox Church in Karelia reached the Arctic Ocean with the founding of the Petsamo monastery.

The western parts of Karelia were taken over by Sweden in the wars between Sweden and Russia in the late 16th and early 17th centuries. This led to conflict between the Lutheran Church of Sweden and the Orthodox population living near the eastern border, and many Orthodox Karelians moved to central Russia around this time.

According to Rauno Pietarinen, Manager of an Orthodox Seminary in Joensuu, there are many orthodox sacred sites in the whole area. Many of these are very old and have been kept intact because they are buried deep in the forest. These are also still very much in use.

With the Russian Revolution of 1917, Finland became independent, and administrative ties with the Church of Russia were severed. The Orthodox Church of Finland was then the subject of a decree (the Decree on the Orthodox Church of Finland in 1918) which put it on a par with the Lutheran Church as the second national church.

The Second World War turned the Orthodox Church of Finland into a church of evacuees. After the Winter War, Finland was obliged to cede Sortavala and all of Ladoga Karelia to the Soviet Union. The Church lost 90 per cent of its property and 70 per cent of its members had to be evacuated from their homes. The Orthodox population became dispersed throughout Finland. The monasteries of Karelia were also evacuated and re-founded at new locations.

The Finnish government alleviated the plight of the imperilled Orthodox Church by enacting a Reconstruction Act under which new parishes were founded to replace those lost in Karelia.

Traditional rites

In Finland, traditional rites and beliefs have long intertwined with Christian rituals.

In traditional Finnish religion, there were twelve Karelian gods. The dead were believed to have a dual function in ancient Finnish society: they were cared for so that they would protect and watch over the prosperity of the family, but they also aroused fear, because it was accepted that they would punish anyone who neglected the rites or who did not conform to the customary norms. In former times the worship of the dead used to take place at sacrificial trees or stones. The first fruits and the first newborn cattle would be sacrificed to them as their share of the annual harvest.

In the Orthodox region of Karelia the old tradition of holding memorial ceremonies in the cemetery continued until the 19th century. Death was followed by a critical period, until the *kuuznedäliset*, the "six week festival". Six weeks after the death of a *pokoiniekka* (a person not yet incorporated into the fellowship of the dead) the family would hold the "final wedding" at night, granting the deceased his or her new status among the dead members of the family. In addition there were two memorial feasts, one in spring, on the second Tuesday after Easter and called *ruadintsa*. The other was called *muistinsuovatta* (Memorial Saturday) and took place in the autumn, on the Saturday before October 26. Another special memorial feast was the *piirut*. This was arranged by the family in honour of a very important ancestor, such as a former head of the family. It was a general feast for the whole kin, not tied to a specific date and would be held whenever the relatives felt it was necessary.

One special group of ancestors in Finnish folk religion consisted of those who had no place at all in the community of the dead. These were called *sijattomat sielut* (restless souls). Their restlessness was caused by inadequate or missing rites in preparation for their journey to the land of the dead. It was believed that they then haunted the house in their quest for peace.

Biodiversity

The bear is one of the most important mammals that can be found in North Karelia. The wolf (*Canis lupus*), the lynx (*Lynx lynx*) and the wolverine (*Gulo gulo*) are regularly seen in the park. During summer the moose (*Alces alces*) can be found in the mossy treeless mires in search of food. Wild forest reindeer (*Rangifer tarandus fennicus*) are also occasionally sighted. Today, around 20-30 Canadian beavers (*Castor canadensis*) inhabit the park. Their burrows and dams can be found in almost every

stream. North Karelia's present beaver population originated from two beaver mating pairs, which were brought to the River Näljänjoki in 1945.

Birds that nest in the park are the swan (*Cygnus cygnus*), Bean goose (*Anser fabalis*), common crane (*Grus grus*) and many bird species that typically inhabit mires. Northern species represented in the park are the whimbrel (*Numenius phaeopus*) and the wood sandpiper (*Tringa glareola*) and of the eastern species there is the Blyth's reed warbler (*Acrocephalus dumetorum*). Geese rest in the park's mires during migration season. There are also many birds of prey and tetraonids in the area.

Conclusions and Lessons learnt

The Northern Karelia biosphere reserve while sparsely populated is rich in culture and is also a unique natural area. In this case, the protection of this area and of the Karelian culture are intertwined. In addition, the roots of the Finnish Orthodox religion can be found in this area at the border with Russia. Management of the area needs to recognise the cultural importance and respect the mix of ancient/pagan religion with its Christian successor. Some transboundary issues remain, including political tensions related to exact borders.



Brown bear, *Ursus arctos*, Finland.

© WWF-Canon / Michel Gunther

Dreaming Ecology and Enhanced Protection, Australia: Deborah Rose

Background

The 'natural' and 'cultural' heritage of National Parks is not separate. This is an artificial white-fella separation. They are still boxing the whole into sections, we need to integrate management into a holistic view of the landscape. (Phil Sullivan, 2003). Phil Sullivan is an Aboriginal Heritage Officer with the National Parks and Wildlife Service of New South Wales (NSW) in south-east Australia. Like many Aboriginal people, he has been intensely frustrated at a division that for him and his people makes no sense.²⁹²

Australian Aboriginal people's dedication to the living world of which they are a part poses an interesting challenge to the identification and on-going management of protected areas. The IUCN – World Conservation Union, defines protected areas as areas 'of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of the natural and associated cultural resources, and managed through legal or other effective means.' While the definition does not specifically exclude Indigenous people, it sustains the division, and prioritises the 'natural'. And yet Indigenous people want to be involved in the whole process, not simply as cultural resources, but as participants. Paul Gordon, an elder from NSW put it this way: *'Some animals can't just be classified as fauna. Pademelon is my meat [flesh]. They are my people, my relations.'* He linked this discussion to protection: *'If National Parks has something going with Pademelons, they should talk with us – it's our family.'*^{xxxiii}

Where does this kinship come from?

No one has explained the Dreaming origins of the kinship of the world better than the late Mussolini Harvey whose home country was in Borroloola in North Australia: *White people ask us all the time, what is Dreaming? This is a hard question because Dreaming is a really big thing for Aboriginal people...The Dreamings made our Law or narnu-Yuwa. This Law is the way we live, our rules. This Law is our ceremonies, our songs, our stories; all of these things came from the Dreaming...The Dreamings are our ancestors, no matter if they are fish, birds, men, women, animals, wind or rain. It was these Dreamings that made our Law. All things in our country have Law, they have ceremony and song, and they have people who are related to them...In our ceremonies we wear marks on our bodies, they come from the Dreaming too, we carry the design that the Dreamings gave to us. When we wear that Dreaming mark we are carrying the country, we are keeping the Dreaming held up, we are keeping the country and the Dreaming alive...That is the most important thing, we have to keep up the country, the Dreamings, our Law, our people, it can't change. Our Law has been handed on from generation to generation and it is our job to keep it going, to keep it safe.*²⁹³

Dreaming is religion and religious practice: it is the sacred in action, the sacred in motion, the sacred in the everyday life of the world. It would be difficult to contend that Dreaming action constitutes a theology. Much more meaningfully, it constitutes an ecology.

Dreamings are the great creative beings who came out of the earth and travelled across the land and sea. The Australian continent is criss-crossed with the tracks of the Dreamings: walking, slithering, crawling, flying, chasing, hunting, weeping, dying, giving birth. They were performing rituals, distributing the plants, making the landforms and water, and making the relationships between one place and another, and between one species and another. They were changing shape from animal or plant to human and back again, and they were becoming ancestral to particular groups of humans and other beings (totemic groups). Through their creative actions they demarcated a whole world of difference and a whole world of relationships which cross-cut difference. They are responsible for the patterns and connections, for the webs of life that facilitate life's capacity to flourish.

^{xxxiii} 'Pademelon' is a small marsupial; Mr Gordon is probably referring to the threatened red-legged Pademelon. Paul Gordon is quoted in: Rose, D. *Sharing Kinship with Nature: How Reconciliation is Transforming the NSW National Parks and Wildlife Service*, National Parks and Wildlife Service, NSW, Sydney. Online: http://www.nationalparks.nsw.gov.au/PDFs/Sharing_Kinship.pdf, p. 54.

So Dreaming is all about the life of this world: its kinship, its wider connections, its origins, its complexity and its desire. Dreamings travelled, and they stopped, and they changed over into permanent sites or into other living things, and they stayed. Equally, however, they kept going. Dreamings are masters of an art that includes both motion and stasis; they are both here and there. They also are both then and now: both origins and contemporary presence. People interact with Dreamings in daily life as they do their hunting, fishing, gathering, visiting, and resting; as they manage parks and guide tourists. Dreamings pervade the country and at the same time are localised in sacred sites. Such sites are origin sites, creation sites, places where the sacred power of creation is particularly concentrated. Sacred sites may be dangerous, they are always powerful, and the Australian nation has legal commitments to their protection.

Protection

In Australia a terrestrial protected area is invariably the home of Aboriginal people, and so too are many marine protected areas. People want to be involved in making decisions about their home and their kin and in many contexts they have the right to be involved. Almost every protected area contains sacred sites, and some of them in effect *are* sacred sites. This case study explores an example from south-east Australia that shows how history, biodiversity, religion, society and ecology can be woven into a fabric of protection that overcomes the nature-culture divide and that enhances the capacity of all life, including human life, to flourish²⁹⁴.

▪ **Gulaga National Park, NSW**

Gulaga is a mountain on the south-east coast of Australia. Named Mt Dromedary by Captain Cook when he first sighted it from the sea, the mountain is sacred to the Yuin Aboriginal people of the region. Gulaga is a Dreaming woman: she is a Dreaming place, or sacred site, a place to which Yuin people are uniquely connected as a consequence of creation.

The Aboriginal people and the mountain have both experienced the full gamut of colonisation since the 1840s when White people first settled in the grassy plains of this area. Between 1877 and 1910 the mountain was the site of intensive mining: 335 kg of gold were extracted in that period. Much of the rainforest was destroyed in the area where miners worked, and the damage to ecosystems was severe. According to foresters, however, it has now regenerated. Foresters have been active on the mountain for most of the history of settlement, and during the period 1880–1970 when this area was a thriving dairy community, farmers cleared up the slopes to the point where it just was not viable any more. Human disruptions opened areas on the mountain that were subsequently swept by violent fires. In spite of these impacts, the mountain is botanically rich. There are three types of rainforest as well as several types of Eucalypt forest. According to the Management Working Plan: “Botanically, Mt Dromedary ... is of unusual interest and of high conservation significance...”. In recognition of this significance the eastern side of the mountain and the summit were designated ‘Mount Dromedary Flora Reserve’ under the Forestry Act. The ecological significance of the Flora Reserve led to its inclusion in the Register of the National Trust and listing by the Australian Heritage Commission.

In 1989 the Forestry Commission of New South Wales (hereafter referred to as Forestry) began a timber removal project on the west side of the mountain. Yuin women and their relatives sought to ban that logging, and they were joined in their action by White people from all of the communities within sight of the mountain.

The women took their concerns to Forestry, and to the NSW National Parks and Wildlife Service. Forestry agreed to halt logging while the matter was investigated. The main basis of the women’s action was that the mountain is a sacred place, one of a series of sacred mountains along the coast. Underlying the action to stop logging was a sustained belief among Yuin people that the mountain is theirs: they belong to it, and it belongs to them. Convergence of opposition to Forestry was striking. Most of the White people in the area also opposed logging activity. Many White people spoke of the need to protect water supplies, to control erosion, and to sustain biodiversity. Yuin people spoke of these issues too. And just as there was convergence around ecological issues, so too was there a degree of convergence around the matter of the sacred. Many of the White people involved in opposing

Forestry knew many of the local Yuin people, and had known for some time that the mountain was sacred to them. Some of these people had also come to their own understanding that this was a sacred mountain. That is, some of the local White people understood the mountain to be sacred in reference to themselves as well as to Aborigines.

In the end, Forestry agreed to stop logging the western side of the mountain (the eastern side already was a Reserve). In January 2001 the whole mountain was incorporated into a new National Park, named Gulaga, and the park is now being handed back to Yuin people for joint management. The work that local people – Indigenous and non-Indigenous – undertook to protect the place in the plurality of its ecological, historical, and sacred dimensions was a form of protection that recognises the densely precious qualities of these complex landscapes²⁹⁵.

Lessons for Protection

Nothing in this story speaks to concepts of wilderness. The mountain had been dug up, turned over, and filled with tracks and overhead conveyances during the brief period of mining. It had been filled with coupes and skids in the course of forestry. Whole sections of forest had been taken out and replaced with uniform and crowded little nurseries, and it had been burnt both deliberately and accidentally. The biological legacy of diversity remained and has reasserted itself. The rainforests are taking over mine sites, forests return into the coupes, and the dynamic interaction between wet and dry forests continues its delicate dance. The power of the mountain is perhaps more evident today than ever before: not only has it endured, it has recuperated the life-giving propensity known as resilience.

The sacred qualities of the mountain ensure that something special can be experienced in a place that is so rich in the creative powers of life. I worked to help protect the mountain from logging by assisting the Yuin women in documenting their claim that the mountain is sacred. Here, and in other protected places throughout Australia, I learned to experience multi-dimensional qualities of human life in a living world. At Gulaga you can see the historical past because traces both of destruction and restoration are there. You see creation not only in the shape of the mountain but in many ephemeral forms as well. And thus you can come to understand that creation was not a one-off event in the past, but is an on-going process of life. Dreaming action in the world created botanical communities; here at Gulaga they are complex. Every tree, indeed every plant that grows, is a contemporary effervescence of the Dreaming, and when the winds carry the fresh smell of eucalyptus and mimosa you breathe creation.

Dreaming ecology offers an account of connectivity between humans and other organisms and environments that treasures the coming forth of life and its way of working itself into patterns and connections. This ecological vision finds the sacred in the world of living things without demanding dogma, confessions of belief, exclusionary access to truth, or a transcendent imprimatur of value. It offers an expanded and enhanced concept of protection because it expresses and expounds connections. And it reaches out across peoples, places, and species, extending a strong invitation to love and take care of the living world.

Religious traditions develop worldviews that identify ultimate values. Our 21st century efforts to protect biological and cultural diversity will depend in large part on how well we are able to articulate the non-negotiable value of the connectivities that sustain life on Earth. Dreaming ecology offers a template for ways of articulating ultimate value – not by setting the sacred aside from the world, but by increasingly understanding the sacred as a process within the living world. As the Gulaga study shows, people's love of the sacred can become a powerful force in the protection of ecosystems. Conservation policy that is designed to work across boundaries such as natural-cultural thus takes significant steps toward a larger goal that may well define our long-term capacity for conservation: the integration of knowledge and wisdom.

Sierra Nevada de Santa Marta, Colombia: Stephanie Mansourian²⁹⁶

Basic Data:

Declared: 1979 (First established in 1964 and then extended to MAB)

Total area: 2,115,800 ha (including the 383,000 ha Sierra Nevada de Santa Marta National Park and the 15,000 ha comprises Tayrona National Park)

Category: Man and Biosphere reserve (Sierra Nevada de Santa Marta and Tayrona National Park, IUCN Category II inside MAB)

Faith: Traditional

Background

The Sierra Nevada contains the source of 35 watersheds and is a vital source of water to over 1.2 million inhabitants. It is a landscape of biological juxtapositions; including palms, cacti and tropical dry forest which fringe the park's northern border along the Caribbean coast, while tropical rain forests, treeless plains, and snow-capped peaks are found in the interior. Before the arrival of the Spaniards, roughly 500 years ago, the Sierra supported a large indigenous population. However, with the Spanish conquest, the lower altitudes of the Sierra were ransacked, sacred sites looted and deforestation began. Since the 1950s, deforestation for agriculture and livestock rearing has been the main threat to this unique area. Some 85 per cent of the region's forest have now been lost. Today, climate change coupled with deforestation, is increasing ice melt from the top of the Sierra, leading to flooding and erosion downstream.

The original inhabitants of the Sierra were the Tairones. Their descendants are the indigenous communities of Kogi (Kággaba), Arhuacos (Iku) and Wiwa (Arzarios) peoples, whose populations are estimated at about 32,000 - 45,000 today and whose territories overlap 85 per cent of the Sierra. These pre-Colombian civilisations survived the Spanish Conquest by hiding deep in the Santa Marta rainforest. The arrival of outsiders has however led to a loss of territory for them and organisational fragmentation. Many groups have been displaced and their sacred sites looted. More recently, there has been a general move towards returning land ownership to indigenous communities throughout large sections of Latin America, and the Sierra Nevada de Santa Marta is no exception. Because many of the communities in the Sierra actually respect nature more than western traditions, and their practices are frequently more in tune with nature, this move can be seen as a positive step. However, drug trafficking, cattle rearing and plantations of oil palm and bananas remain a problem in this area; as does the long-standing guerrilla conflict.

Religious significance

Officially 95 per cent of Colombians are Catholic. However, there still are many traditional religions which intertwine with monotheism. Four ethnic groups live in the Sierra Nevada de Santa Marta and they see themselves as guardians of the Sierra: the Kogi, Arhuacos, Wiwa and Kamkuanos. The latter however have integrated to such an extent with the "conquistadores" that their original culture has been lost. The spiritual leader of the Kogi, Arhuacos and Wiwa is the Mamo. The Mamo performs three roles: as a healer, as a priest, and as a sort of village chief. Importantly, the Mamos are also the ones that plan agricultural activity using their knowledge of climate, astronomy and other relevant environmental factors.

The notion of cycles and interdependence is essential to these indigenous groups. They see the Sierra Nevada as the link between earthly and spiritual matters, between the past and the present, and as what unites people to Mother Earth. Land is not considered property but rather a "relative". The Sierra Nevada is considered the heart of the world, known as *umunukunu*, from which they believe the human race to have originated before spreading to other continents. For these indigenous groups, all living things are believed to have originated in the heart of the Sierra and are all descendants of one common ancestor. There is therefore, an underlying connection between humans and nature.

The Kogi, Arhuacos and Wiwa believe that Mother Earth has entrusted them with stewardship over *umunukunu*. Each of the three groups was given a special function by Mother Earth. To achieve this

function, each was given a specific territory, tools and clothes. Each individual was then attributed a specific role to fulfil under the Law of the Mother.

The sacred sites within the Sierra are where it is possible to listen to the Mother, and where it is possible to be in communion with the earth.

The Law of the Mother

The Kogi, Arhuacos, and Wiwa are thus practitioners of the “Law of the Mother”, a complex code of rules that regulates human behaviour in harmony with plant and animal cycles, astral movements, climatic phenomena, and patterns of transhumance in the sacred mountain.

An example of this deep held respect for nature can be seen in rituals to ‘pay back’ nature for the use of a particular species of tree to build a bridge for instance, by re-planting saplings of the same species and tending them with great care. The Law is the guiding principle for life. It is seen by the Sierra’s people as functioning around cycles. As with the seasons, there is a certain amount of repetitiveness which must be obeyed. Single acts that are not part of a cyclical pattern are meaningless. Equally, the repetition of acts that happened in ancestral times is very important. The concept of inextricable linkages between past and present but also between different groups (human and biodiversity) is also very important to them.

Problems or conflicts are traced back to imbalances with nature that require harmonisation, restoration and revitalisation, to re-establish appropriate balance with nature.

Biodiversity

With its rainforest and snow capped mountains, the biodiversity found in the Sierra is significant and representative of a range of ecosystems. Research shows that the area possesses a high level of endemism. There are at least 600 botanical plants and over 3,000 vascular plants. 628 species of birds have been identified, including macaws, parrots, passerines, raptors, the white-tipped quetzal, which is endemic to Sierra Nevada, and a population of the endangered Andean condor. The puma (*Felis concolor*), jaguar (*Felis onca*), giant anteater (*Myrmecophaga tridactyla*), red howler monkey (*Alouatta seniculus*), deer (*Odocoileus sp.*), tapir (*Tapirus terrestris*), collared peccary (*Tayassu tajacu*), wild cat (*Felis sp.*) and the characteristic rodent species *Thomasomys laniger* are among the 120 mammal species found in the reserve. Endemic species include the brocket deer (*Mazama americana-carrikeri*).

The Sierra Nevada also harbours 46 species of amphibians and reptiles; those that live above, 9,900 feet (3,000 metres) are endemic, having evolved in complete isolation. Endemic species include the frog *Atelopus carrikeri* and *Geobatrachus walkari*. Green turtle (*Chelonia mydas*) and loggerhead turtle (*Caretta caretta*) as well as *Lepidochelis kenpii* and *Eretmochelys imbricata* lay their eggs on the beaches of Tayrona National Park, the only area in Columbia where these reptiles are protected.

Vegetation ranges from subhygrophyte to snow levels and includes cloud forest and high barren plains. In Tayrona three types of vegetation are to be seen: forest/matorrales with *Prosopis julliflora*, *Acacia tortusa* and *A. farnesiana*, and *Apuntia wentiana*; dry forest with *Enterolobium cyclocarpum*, *Spondias mombin*, and *Pseudobombax maximum*; and humid forest composed of *Scheelea magdalenica*, *Sabal mauritiformis*, *Caludonica palmata* and *Desmoncus sp.*

Conclusion and Lessons learnt

The situation in the Sierra Nevada de Santa Marta is one where the traditional communities living there long before the arrival of the Spaniards had established a comfortable and apparently sustainable way of life that was in harmony with nature. The disturbance of this balance through colonisation and “modernisation” left 85 per cent of the Sierra deforested. Today however there is a resurgence of traditional customs and ways of life in order to protect the unique biodiversity of the Sierra.



Restored village of indigenous people called Alto di Mera. Sierra Nevada de Santa Marta National Park, Colombia.

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The NGO, Fundación Pro-Sierra Nevada de Santa Marta (FPSNSM), has been actively working with the Park Service and local communities to develop an acceptable management plan for the Park. A Land Acquisition programme has been set up to return land to indigenous communities. For example, The Nature Conservancy (TNC) in association with Fundación ProSierra, has purchased nearly 10,000 ha of ancestral lands that were then returned to the ownership of the Gonawindua-Tayrona Organization, one of the local indigenous groups. TNC is working directly with an association of indigenous groups to acquire another 10,000 ha in the Sierra Nevada to return to indigenous ownership.

These on-going conservation initiatives in the Sierra Nevada are an example of the importance of building on indigenous knowledge and customs. For this to be effective however, recognition and empowerment of minority groups are an essential prerequisite, as is official stewardship over natural resources. The challenges remain, particularly given the state of both environmental degradation but also erosion of cultural knowledge and identity. Both of these will need careful re-constructing and this will remain difficult in the current political climate of Colombia.

Gunung Lumut, Kalimantan, Indonesia: Liza Higgins- Zogib and Iwan Wibisono²⁹⁷

Basic Data:

Declared: Proposed National Park

Total area: 25,000 ha

Faith: Traditional (Hindu Kaharingan)

Background

For millennia, the forests of Lumut Mountain have been home to Dayak tribes of Central Kalimantan, Indonesia. This is a mountain whose pristine forests have sheltered and provided for an ancient indigenous people, rich in culture. This is a mountain whose slopes are alive with thousands of plant and animal species. This is a mountain where souls are said to leave their bodies and ascend to the other side. This is a *sacred* mountain whose forests are now threatened by illegal loggers and gold miners. If this mountain and its surrounding area are not protected soon, the natural, cultural, and sacred values of this region may be lost forever.

The Lumut mountain range rises up from the heart of Indonesian Borneo. One of the few remaining intact forests on the Indonesian side of the island, Gunung Lumut does not yet benefit from formal protection. Recognising this need, the local government has initiated the process of designating the area as a National Park – a critical first step towards safeguarding the amazing cultural and biological diversity of this threatened area.

Biodiversity

A particularly diverse range of forest types are found here: from lowland rainforest, heath forest, and lowland dipterocarp forest to limestone forest, montane forest, and sub-alpine vegetation. Consequently the diversity of fauna and flora is spectacular. Sun bear (*Helarctos malayanus*), clouded leopard (*Neofelis nebulosa*), white fronted langur (*Presbytis frontata*) and Bornean gibbon (*Hylobates muelleri*) are just some of the many mammals who share a home with a huge variety of plants (at least 51 orchid species) and birds (like the Rhinoceros hornbill, *Buceros rhinoceros*).

There are many commercially valuable species of plants and trees^{xxxiv} in the forests of Gunung Lumut and the area also plays an important water catchment role, feeding into the Barito River, one of the largest rivers in Borneo.

Belief System

The Dayak people follow an ancient traditional belief system called Kaharingan, meaning ‘life’ or ‘that which sustains’. It was spread as an oral tradition and has existed in Kalimantan for as long as the Dayaks can remember. A religion quite specific to Central Kalimantan, Kaharingan is practised widely amongst the Dayak people, despite the many conversions to some of the more modern faiths.

Because of its traditional nature and due to the absence of a holy book^{xxxv}, the Kaharingan faith was not recognised as an official religion in Indonesia. To solve the problem, the name *Hindu Kaharingan* was adopted in 1983. Hinduism was chosen as it reflected similarities in principles and perceptions to the native faith and possibly also because of the open nature of Hinduism, which historically has had no issue in adopting the beliefs and practices of a wide variety of sects.

From then on Hindu Kaharingan was recognised as an official religion. Recent figures show the following split of faiths on Kalimantan: 67.65 per cent Muslim, 15.35 per cent Hindu Kaharingan, 14.44 per cent Protestant, 2.25 per cent Catholic and 0.3 per cent Buddhist.

^{xxxiv} Examples of valuable plants include *Dyera constulata* (Jelutung), *Agathis borneensis* (dammar), *Eusideroxylon zwageri* (iron wood), *Gonystylus macrophyllus* (ramin bukit), and *Koompassia malaccensis* (kempas). Many tree species within the dipterocarpaceae family are of commercial value, primarily those belonging to genera *Shorea*, *Dipterocarpus*, *Hopea*, and *Vatica*.

^{xxxv} A criterion for being accepted as a religion by the Indonesian government

Followers of Hindu Kaharingan explain that the main differences between their faith and that of Balinese Hinduism are that Hindu Kaharingan does not have a holy book (Balinese Hindus have the Tripitaka) and that whereas Balinese Hindus celebrate special sacred days, Hindu Kaharingan's religious ceremonies are based around natural cycles and occurrences. *Belian* ceremonies (rituals for life) are often held in the community to celebrate birth, marriage, harvest and healing (the latter being considered one of the most important rituals).

The ten villages in the immediate vicinity of Gunung Lumut all practise the Hindu Kaharingan religion and for them the place that they have long protected and called their home, is sacred. Belief has it that Lumut mountain is a point of transit for departed souls before their ascent to *Bawan Tenangkai*, or *Nirwana* (heaven).

Rituals for the dead (*Wara* ceremonies) are commonly held to send off souls from Gunung Lumut to *Nirwana*. It is believed that the dead have either a 'clean' soul (*Kelelungan*) or an 'unclean' soul (*Liau*). The *Wara* ceremonies, often quite elaborate, are held to cleanse these unclean souls. They transfer the *Liau* to Gunung Lumut so that they can be purified and proceed to *Bawan Tenangkai*, or *Nirwana*. It is truly a time when the community gets together and where bonding and friendship between ceremony participants are strengthened.

The *Wara* practice is one living example of culture and religion, linked with a sacred place. The Dayak communities in the immediate vicinity of Gunung Lumut and further a-field recognise the holiness of the area and its power to bestow supernatural virtues during meditation practice. It is the resting place of Dayak ancestors, and on a more practical level the forests of Gunung Lumut provide the traditional medicines, water and food necessary for Dayak survival.

To maintain the sanctity of Gunung Lumut, the Dayak Taboyan^{xxxvi} communities who live in the area uphold the belief that the forest, stones, water and other natural features, should not be disturbed. If anyone should break these unwritten rules then it is believed that misfortune will fall upon the perpetrator and rituals to 'wash' the whole village are necessary.

Threats

But these protection measures, used successfully by the Dayak for thousands of years, cannot compete with modern-day threats. Legal and particularly illegal exploitation of natural resources in the area threatens the biological and cultural integrity of a naturally rich land. Indeed the forests of Borneo are shrinking at an alarming rate and Gunung Lumut is not untouched by the demand for timber, coal and gold.

Already signs of ecological degradation are apparent. And the allure and promise of economic gain have begun to shift the outlook of local communities. A decrease in natural resource quality and quantity (rattan, food, wood, medicinal plants) has been reported around Gunung Lumut – a warning sign that other measures are now needed to protect the area from further destruction.

A Future for Gunung Lumut

WWF is working with the governments of Indonesia, Malaysia and Brunei to encourage the protection and sustainable use of their forests, before it is too late. *The Heart of Borneo initiative* aims to effectively conserve around 22 million ha of forest between the three countries. Creating new protected areas – including Gunung Lumut – is one of the main objectives of the initiative.

Gunung Lumut has been proposed by the local government (Barito Utara District) to become a National Park, a proposition which has wide support from the local communities. At this stage of the procedure the government must meet with the communities to define traditional use areas for religious ritual, and use of natural resources. Such a collaborative process is required for the National Park to be

^{xxxvi} Principal Dayak tribe living in the region of Gunung Lumut.

successful and the government, realising this, has begun to develop collaborative management approaches to protected area management, where local communities will be involved in all stages of protection.

The people of Gunung Lumut hope that by supporting the National Park initiative and also that of a World Heritage Site proposal, their livelihoods, their culture, and their sacred places will be spared.



Dayak in ceremonial head-dress (left), and ceremonial instruments (right), Gunung Lumut, Indonesian Borneo.

Iwan Wibisono

Part 7: Managing for faith and nature

“In China, several of the country’s biosphere reserves contain areas and temples of considerable spiritual and religious importance. They include Dinghu Shan, one of the four noted Buddhist mountains in the south of Qinling. In Xishuangbanna in the south-western part of the country, holy hills set aside by the Dai people have preserved islands of biodiversity, largely through the belief that the flora and fauna on them belong to the gardens of local deities. There are also some 400 ‘longshans’ in Xishuangbanna, areas of primeval forest near the village, where the Dai people believe God lives and so the animals and plants are God’s companions deserving to be strictly protected from invasion and from collecting, hunting, felling and cultivation”.²⁹⁸

We have seen that faiths relate to the protection of natural resources in two principle ways: by maintaining particular areas of value (sacred sites and also in some cases more general guidance about protection of natural resources) and more broadly as a result of their wider influence on local and national policies and financial investment. The strong messages of support for conservation issues from almost all the world’s faiths, large and small, means that the potential for greater synergy already exists. In this chapter we look at what this could mean for national or regional conservation policies and at some of the opportunities and challenges that result. The first part considers the links between faiths and protected land (we use the term “sacred site” here as a kind of shorthand). The more general issues relating to policy and investment are discussed with respect to challenges to faiths in the latter part of the chapter.

We start below with a question from a conservation perspective, about whether sacred sites are actually useful ways of conserving biodiversity and then switch round and look from the perspective of faith groups about whether protected areas are a good tool for sacred sites, before considering how they might be integrated into conservation strategies.

Are sacred sites a good vehicle to conserve biodiversity?

Much has been written about the actual and potential role of sacred sites in conserving biodiversity, but has anyone actually proved the links? There has as yet been no comprehensive global survey into the conservation effectiveness of sacred sites (but then neither has there been such a survey of protected areas). The question also relates in many cases more generally to whether or not indigenous and local people are effective in conserving biodiversity, itself the subject of vigorous debate²⁹⁹.

Generalisations are dangerous and while there is good evidence that some local communities have been very effective in conserving biodiversity and managing natural resources, others have caused degradation; periods of rapid change in cultures are particularly dangerous in creating the conditions where mismanagement can occur. Some people regard sacred sites as awesome, wonderful places suitable for praise while others regard them as fearful or dangerous places and these different perspectives also influence management. Today many local communities are increasingly squeezed for space and resources which puts them in a position where immediate necessities take precedence over long-term sustainable use. In these conditions sacred sites are particularly important from a biodiversity perspective, both because they are likely to be amongst the last areas disturbed and also because they provide a focus and an additional reason for encouraging conservation management.

The limited quantitative evidence that does exist suggests that sites protected by faiths for their spiritual values can indeed also perform a valuable function in protecting wild nature. Sacred sites are generally highly protected (although limited harvesting may be acceptable in some cultures) and also often long-established, maintaining sanctuaries of natural or semi-natural areas where the original ecosystem has been widely disturbed or destroyed.

A series of research projects are gradually identifying the conservation importance of sites protected by faiths. Sacred sites in the Tanami Desert of Australia serve as focal points for the Warlpiri aboriginal people for ceremonies to increase the number of plants and animals, coupled with strict taboos on taking specific types of food close to these sites³⁰⁰. Most sacred groves in Ghana are associated with particular taboos and forms of protection for particular species of plants and animals. For example the

bongo (*Tragelaphus euryceros*) is protected by the Mintiminim god in Nkwanta province. Several plants, including the “odum” tree (*Chlorophora (Milicia) excelsa*) and the liana “ahomakyem” (*Spiropetalum heterophyllum*) are also protected³⁰¹. In the Maharashtra region of India, forty contiguous sacred groves include most of the native plant species and the forest structure is unique, representing the least disturbed islands of old-growth in the region³⁰². And the Russian Association of Indigenous Peoples of the North has produced a detailed technical report on the conservation value of sacred sites in partnership with Conservation of Arctic Flora and Fauna (CAFF)³⁰³

Drawing on these projects, and on the many examples discussed in chapters 5 and 6, some general trends and tendencies can be identified:

- **Scale:** most sacred sites are quite small and therefore unlikely to be able to conserve an entire ecosystem however well they are protected, because populations of some species will be too small to remain viable. (There are exceptions such as large-scale protected landscapes)
- **Age:** many sacred sites are extremely old, meaning that if nature has been strictly protected throughout the period, the site can contain individuals of extreme age. This is particularly significant in the case of sacred groves in places where old-growth forest has otherwise been destroyed, because the veteran trees are likely to contain associated species unable to survive in alternative habitats.
- **Species:** the main conservation benefit of many sacred sites is in the protection of particular species, such as crocodiles in sacred ponds in West Africa, monkeys around temples in many Asian countries or particular species of commercially valuable trees. Some sacred sites are actually managed to maintain valuable medicinal plants or other species, where the net biodiversity benefits can be even greater.
- **Naturalness:** there is no overall trend in terms of how natural a sacred site can be. Some, such as the sacred mountains or islands where few if any people are allowed, are likely to show high levels of ecological authenticity, others such as the fruit gardens of Borneo are almost wholly cultivated. In general, because most sacred sites are small, they will only contain a proportion of the total biodiversity of the region.
- **Diversity:** there is a wealth of reasons why sites are sacred, of ways in which this sacredness is “managed” daily and also, on the biological importance of these sites.

The role of sacred sites also often extends beyond their immediate boundary, particularly if they are in a region where other natural habitat remains. Small, highly protected areas can serve as “arks” by maintaining key threatened species that can then spread out into the wider environment and as a seed source for natural regeneration or restoration projects.

In 2002, UNESCO held a workshop on sacred natural sites in Kuming, China, which included a SWOT (Strengths, weaknesses, opportunities and threats) analysis of their potential role in conservation, which is summarised in Table 6 following³⁰⁴. This includes both issues as related to conservation and those with respect to the impacts on faiths and local communities, thus forming a suitable bridge to the next section.



Left: Bara tomb at Isalo National Park, South Madagascar. Much of Isalo remains sacred to the Bara tribe.

Right: Yakutian women at a holy tree, Sakha Republic (Yakutia), Siberia, Russian Federation

© WWF-Canon / Nathalie Racheter (left); © WWF-Canon / Hartmut Jungius (right)

Strengths and opportunities	Weaknesses and threats
High conservation value: due to low human impact and restricted access sacred sites are often in a pristine state, thus serving as sanctuaries for rare, endangered and endemic species. Their role as gene pools for biotic resources can directly contribute to conservation and as “indicator sites” for the restoration and rehabilitation of degraded systems. Based on species’ inventories in sacred sites, strategies can be formulated for the wider reintroduction of native and endemic species.	Insufficient recognition: both by governments and the wider public; in many countries, national policies and legal systems do not acknowledge the importance of sacred natural sites and therefore their conservation and management is not integrated into policy-making. Overall land management strategies do not include indigenous peoples in decision-making processes. It is often very difficult to obtain public funding for the conservation of sacred natural sites.
Sacred natural sites often have more sustainable protection than legally protected areas: as they are community areas fully in line with traditional belief systems and values, they tend to be more sustainable than classic legally protected areas. In fact, their preservation from “voluntary protection” can enable long-term biological successions and can also be used as a public awareness demonstration site offering the opportunity to witness active sustainable resources management and nature conservation.	Issues of secrecy: secrets held by custodians of a sacred natural site may cause its non-recognition, due to the reticence of indigenous / traditional peoples to reveal their spirituality or disclose their knowledge to outsiders. Also when sacred natural sites are exposed to outsiders who do not share/respect their cultural or sacred beliefs, they may lose significance or meanings or be exposed to abuse. Finally, access can be restricted to specific ethnic groups only, thus reinforcing cultural differences and conflicts.
Model sites for management: sacred natural sites integrate cultural and natural values in a single management system and can act as models for participatory conservation. Much can be learned from formulating buffer zone management schemes around protected core areas. In legally protected areas with a resident population, the integration of sacred natural sites can improve people’s attitude to protected area regulations.	“Arbitrary selection” of sacred natural sites: from a biodiversity conservation perspective, site selection does not follow a systematic pattern, which would enhance species’ diversity and conservation. They may for instance be too small or fragmented. On the other hand, great caution should be exercised so that spiritual values are not disregarded with ecological features being the sole consideration.
Important for preserving traditional knowledge: Classical western science is not the only path to “knowledge” acquisition. Local and traditional knowledge of adapted land use practices are often found in sacred natural sites and many serve as “healing sanctuaries”. Traditional ecological knowledge is often applied with regard to their management, thus providing good opportunities for integrating western science and traditional knowledge systems.	Artificial ecosystems: sacred natural sites are not necessarily pristine wilderness, but have been shaped or sometimes even created by humans (e.g. by favouring one species over another). Some may have a limited number of species and / or territory. They do not have specific conservation targets and thus cannot meet modern biodiversity conservation standards. Human population growth and pressure may damage “nature” in sacred natural sites.
Important manifestations of culture and cultural diversity: in many cases, sacred natural sites are reference points of cultural, religious and national identity, often with associated cultural rites and practices (music, song, dance, poetry, folklore). They offer the possibility of supporting fragile and threatened cultures, particularly through the transmission of knowledge by elders.	Cultural changes: sacred natural sites are subject to changing value systems and cultures and therefore may “lose or gain their sacred value” and with this any conservation function that might exist. Modern development and changes of societal systems may significantly reduce their number and integrity. Moreover, transmission of traditional knowledge is collapsing.
Ecotourism destinations: assisting visitors in experiencing new cultures while learning about nature. If practised and managed well, eco-tourism linked to sacred natural sites can benefit local people directly, particularly if due respect is paid to indigenous and local peoples as <i>full partners</i> .	Distribution of economic benefits: custodians of sacred natural sites are often not strong enough to resist adverse impacts. For example, if eco-tourism is developed, local people may not always benefit from the economic returns nor are they in a position to maintain the spiritual and physical integrity of the site.
Intrinsic value of sacredness in a sacred natural site: this should be respected and preserved.	Scarcity of scientific knowledge on traditional ecological knowledge (TEK) and sacred natural sites: while TEK is often tied to sacred natural sites, the study and validation of TEK is often carried out when deemed useful to western science thus stripping the knowledge from both its context and control of those who maintain it. This process denigrates the value of other kinds of knowledge held by certain groups.

Table 6: UNESCO SWOT analysis on the potential role of sacred sites as tools for biodiversity conservation

Are protected areas a good tool for maintaining sacred sites?

Sacred sites have in many cases already been in existence for hundreds or even thousands of years, in most cases carrying out a useful conservation function alongside their spiritual role. Now there is increasing discussion about bringing them more formally into the protected areas network.

Governments are often interested because they can help to increase protected area coverage with little effort. Conservation organisations tend to be enthusiastic because of the new and highly secure additions to national protected area systems. But what is in it for the faiths themselves? Are there any advantages in gaining “official” protected area status or would they be better off in keeping things as they are? Protected area status for sacred sites offer the possibility of a number of benefits but also carries some potential costs:

Potential benefits

- **Strengthening protection:** becoming an officially recognised part of a national protected area network gains valuable recognition for the significance of a site and the importance of maintaining its integrity. It means in most cases that the sacred site will then also be protected by both policy and legislation. This can be critically important at a time when cultural conditions are changing fast and for instance several communities in Madagascar are currently discussing options for gaining protected area status for their sacred sites to help protect them from degradation.
- **Strengthening management:** integration also usually brings a site additional resources for management including new partners, such as the national protected area agency and sometimes also NGOs, plus access to other forms of capacity building and support. In Xishuangbanna, China, local communities have been able to attract additional resources for managing holy hills that they have been protecting without reward for centuries.
- **Attracting funds and support:** being a protected area also increases options for developing fundraising activities such as ecotourism; in many countries it may also allow the traditional managers of sacred sites to access state conservation funding or to attract foreign donors. Access to support has been an important factor in the involvement of the *baka* people in management within Lobéké National Park in Cameroon.
- **Increasing recognition:** gaining additional status and recognition for the site and for the people revering it may help to protect it in more subtle ways than simply through government regulations.

Potential costs

- **Loss of sacred values:** protected area status also attracts greater attention to many sacred sites including an increased visitation from people, many of whom will often not share the same cultural views of the site’s importance. Some communities believe that their sites have suffered loss of intangible and spiritual values as a result. A proportion of visitors to Uluru (Ayers Rock) in Central Australia continue to climb over it, despite the presence of signs requesting that this is unsuitable for a sacred site³⁰⁵.
- **Loss of sovereignty:** if being a protected area means direct control by the state, local communities risk losing control over their own sacred site. Even in cases where they retain a management or co-management role, the fact that there are more stakeholders involved can lead to a more subtle loss of control.

None of the advantages or disadvantages are inevitable and the costs and benefits will depend largely on how issues of management and governance are approached. IUCN recognises a number of different management objectives and governance strategies within protected areas (see Part 3) and sacred sites can be totally protected from visitation and / or continue to be managed by their traditional owners within “official” protected area networks. Similarly, unless carefully planned, the supposed advantages may never materialise.

To answer the question at the beginning of this section, whether or not protected area status is likely to be good for sacred sites will depend on individual conditions, including the needs, aspirations and strengths of the traditional owners, the nature of the site and what protected area status can offer. An assessment of current and anticipated pressures will also help determine the value of turning a site into a protected area. It will also depend on whether the site fits the IUCN definition of a protected area and whether the government agrees to include the site within the national network. In some cases it may be more effective to maintain a more traditional form of management or control.

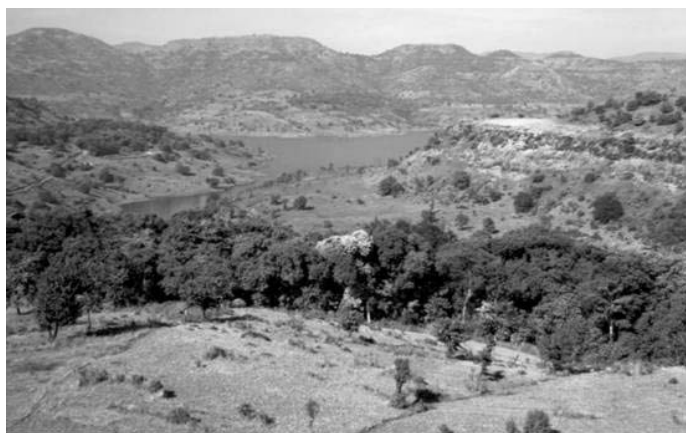
How can sacred sites be integrated into broadscale conservation strategies?

Conservation strategies are increasingly moving away from the traditional rather *ad hoc* practice of protecting land and instead focusing on the careful planning of protected area networks, integrated with other forms of land use³⁰⁶. Sacred sites are, by their nature, in places where faiths wish them to be, rather than selected through some conservation planning exercise, but on the other hand they are also often highly diverse sites for biodiversity that are often likely to feature amongst the priority areas in any biodiversity conservation planning exercise. Sacred sites can therefore contribute to regional conservation in a number of ways, either “officially” as part of a protected area network or “unofficially”. As we have discussed there are arguments for and against both strategies and different approaches are required for different situations.

- **Inside protected areas:** by far the commonest way in which sacred sites and protected areas overlap is through particular sacred sites being contained within protected areas, and we have already described numerous examples in the survey and case studies. This situation has in the past often arisen by accident although today it is also being applied as part of collaborative exercises between local communities or faiths and conservation organisations. In some countries, such as Australia, the density of areas considered to be of spiritual importance is so great that virtually all protected areas will be in this position. Inclusion of sacred sites within protected areas offers both opportunities and challenges to managers. Sacred sites can in some circumstances provide highly protected core zones within protected areas, and additional justification for closing off sensitive habitats: this can be seen in the case of sacred mountains in protected areas in New Zealand, Nepal and elsewhere. Conversely, sacred sites can also increase pressures on biodiversity if for instance they become the object of pilgrimage or if sacred rituals themselves involve hunting or other forms of resource use. The practical implications for managers will be discussed in the following section.
- **As entire protected areas:** there is increasing interest amongst both faith and conservation communities in the concept of converting an entire sacred site into a protected area, and managing it for its dual spiritual and biodiversity values. The World Commission on Protected Areas is currently considering options for greater use of IUCN protected area management category III, currently aimed at natural monuments, for sacred sites, although in theory any IUCN category could be suitable in particular circumstances. For the most strictly protected sacred sites, IUCN category Ia, which effectively prohibits most visitation, could be ideal. In this case, protected area status would be conferring additional protection onto a site of spiritual value to a faith, which could help to prevent degradation by people from other cultures, although to the faith involved it also carries certain costs as discussed above. From a conservation perspective, such sites will often, although not invariably, be small. Small sites generally have more limited value (for example generally being unable to conserve whole ecosystems) but can be extremely valuable in terms of protecting particular components, such as rare plant species and nesting colonies of birds. In a landscape or seascape approach to conservation, small, discrete protected areas should generally be integrated with other natural habitats through the use of buffer zones, wildlife corridors etc.
- **Within broader conservation networks:** we have already concluded that conferring protected area status onto sacred sites may not always be appropriate or useful. This does not prevent such sites being effective vehicles for conservation nor necessarily stop them from being included in broadscale conservation strategies. It may suit certain faiths or indigenous peoples

better to keep their sacred sites outside the official protected area network, for reasons discussed above, but the fact that they are there can still play an important role in landscape-scale conservation strategies and can sometimes be factored into planning as buffer zones, corridors or just unofficially protected sites. (This is not a situation unique to sacred lands and waters and several other land uses can have important biodiversity functions outside protected areas, such as land set aside for watershed protection or avalanche control.)

- **Protected areas around built sacred sites:** sacred buildings are often surrounded by land and sometimes this can be in a very natural state; in other cases faiths are willing to manage land specifically for its biodiversity values. In the UK, the sacred lands project run by the Alliance of Religions and Conservation is working with over a thousand churchyards to increase their value to biodiversity, in effect creating tiny reserves in what are often otherwise very altered landscapes. The European Christian Environmental Network, Eco-Congregation and the Arthur Rank Centre are also working on a similar Living Churchyard and Cemetery project³⁰⁷. Many older sacred sites are now surrounded by native vegetation that may be almost indistinguishable from completely natural habitat and in these cases management of the site can cover both its natural and its built environment.
- **Through land owned by faiths:** some faith groups own both large and small amounts of land, and even quite small changes in policy towards the management of this land can have major implications for its conservation value. This is a very important and frequently over-looked way in which faiths and protected area agencies can collaborate and is examined in greater detail in the section on challenges to faiths below.



Sacred Grove kept from destruction to protect the gods living in it. Panshe, Poona - Maharashtra, India

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Part 8: Challenges

We believe that there is enormous common ground between the attitudes of faiths towards the environment and the current international efforts to complete a global, ecologically-representative protected areas network. Both are rooted in a shared ethical view that humans have an obligation to avoid destroying the rest of biodiversity through their own actions, and both are based on the concept of setting aside areas of land and water to facilitate the conservation of wild nature. But these processes will not necessarily be problem free. The section below therefore looks at some of the challenges that face the various stakeholders involved.

The conservation and protected area communities

Managing sacred sites brings some potential costs along with the benefits. Most protected area managers are trained in natural resource management and a systematic, Cartesian approach to science. These approaches will not work in managing sacred sites within protected areas – there is no agreed way of measuring the number of gods in a landscape nor more practically in assigning relative spiritual values of one site against another – and approaches therefore need to be individual, sensitive and based on a qualitative understanding. Management is made more difficult because what is sacred and irreplaceable to one person may be meaningless to another.

One key principle in managing sites of spiritual value is therefore a recognition of and tolerance for different faiths and belief systems. Protected area managers responsible for sacred sites within national parks and other protected areas will often be managing to maintain and preserve spiritual values that they do not “believe” in themselves. In some cases, a single protected area may contain sacred sites related to more than one faith. This means that the manager will both have to be open to the concepts of other belief systems, even if he or she does not share them, and will also be reliant on consultation with representatives of the faith or faiths involved to determine how a particular feature should be managed, which itself implies a set of skills that are not automatically part of a manager’s expected portfolio. Managing areas of land and sea that have significance to different belief systems needs not only openness to different philosophies and world views but also a willingness to work within the framework of particular faiths.

Particular challenges that have emerged from our research and from the case studies summarised in the book are:

- **Balancing the needs of conservation with the needs of the sacred site:** in some cases these will be virtually the same, but not always. Ritual hunting may be a key factor in the faith but a real problem if the species concerned is declining or endangered. Issues of biological surveying, restoration, poaching patrols and other management actions may sit uncomfortably with the desire to keep sacred sites spiritually pristine.
- **Identifying and mapping sacred natural sites:** because many sacred sites are secret, at least in some faiths, there are many practical challenges involved, for example it is impossible to zone a sacred site within a strictly protected part of a park if the manager cannot identify it, but failure to do so can create serious social and cultural problems. Such studies should also be able to reflect where necessary changes in sacred values over time.
- **Managing visitors:** this can involve two quite different impacts. Visitors to a protected area can interfere with a sacred site and for example experience in Australia, New Zealand, North America and Nepal all show that a proportion of visitors are likely to ignore pleas to avoid particular groves, lakes, caves or (especially) sacred mountains. These may be a very small percentage of the total but can cause huge disturbance to faith communities. Conversely, a site of pilgrimage within a protected area can cause pressure on biodiversity if large numbers of people come to worship.

- **Involving stakeholders:** because sacred natural sites are so important, local stakeholders may require considerable amounts of a manager's time in addressing management issues that arise; one small part of a large reserve can take a disproportionate amount of park staff time.
- **Integrating sacred natural sites into conservation policies:** as mentioned above, sacred sites are chosen for spiritual rather than biological values, although there may be some coincidence between these two. Particularly when such sites occur within larger protected areas, and require special management approaches, the integration of this into the wider aims of the site can sometimes be difficult.
- **Respecting sacredness and difference:** engaging with faith communities on their own terms, recognising and respecting different approaches and belief systems. Genuine cooperation between faith communities, large or small, and protected area communities will only be possible if there is mutual respect, including genuine respect for intrinsic sacred values.

These are all potential pitfalls to be taken into account, but not an overwhelming set of problems; many sacred sites are already integrated very successfully into protected areas or broader conservation strategies.

Part 9: Guidance for balancing the needs of faiths and biodiversity conservation

An increasing number of protected area managers are already working on a daily basis with members of faith groups who have important sites in or near a protected area, or other particular interests in these areas. Faiths are, in turn, trying to understand how they can contribute to efforts at protecting the global environment. There is currently a focus on the future of sacred natural sites and whether getting them recognised by governments as protected areas might have mutual benefits to faiths and nature. Most of us are learning as we go, which is probably resulting in a lot of duplication and wasted effort, and in the course of doing the research for this report we have seen the same questions emerging, and some of the same mistakes being made, in many different parts of the world. Fortunately, this situation is changing as practitioners are meeting to swap ideas and experience. Some general lessons are emerging, along with tentative guidance. In the following chapter we review what is available and make some general suggestions about work that still needs to be done, looking at four main target audiences: the protected areas community, faith groups, local communities and governments.

Protected areas community: The potential or actual conservation importance of sacred sites has been recognised for over twenty years, although it would be fair to say that serious interest has been confined to a relatively small proportion of protected area managers and conservationists. For example, the UNESCO Man and the Biosphere Programme, based in Paris, has run a series of international workshops on the role of sacred sites in biodiversity conservation³⁰⁸, which has drawn attention to the issue and assembled useful advice about the advantages and drawbacks of using sacred sites to conserve biodiversity³⁰⁹. In a linked initiative, the World Commission on Protected Areas has a task force focusing on the Cultural and Spiritual Values of protected areas, which includes sacred sites³¹⁰. The United Nations Environment Programme carried out a survey of sacred values in nature, published as a giant addendum to its Global Biodiversity Assessment³¹¹ and the Convention on Biological Diversity has also paid close attention to sacred values, as has the World Bank³¹². Significantly, the Fifth World Parks Congress, in Durban South Africa, produced a detailed set of recommendations relating to sacred sites, discussed in more detail below. In addition to WWF's work on Sacred Gifts, other large conservation organisations have faith-related projects, including Conservation International³¹³, Flora and Fauna International³¹⁴ and The Nature Conservancy³¹⁵.

A number of guidelines specifically aimed at sacred natural sites are currently available or in preparation. The Convention on Biological Diversity has published the *Akwe Kon* guidelines for the conduct of cultural, environmental and social impact assessments on developments likely to impact on sacred sites³¹⁶. The World Commission on Protected Areas has also prepared guidelines for approaches to sacred sites. Both of these aim to be quite general, setting a conceptual framework for the relationship between faiths and nature rather than providing detailed tools for managers. Management of particular sacred sites are also touched upon in other guidelines from IUCN with respect to indigenous peoples³¹⁷, mountains³¹⁸ and community conserved areas³¹⁹.

IUCN / WCPA Task Force on Cultural and Spiritual Values^{xxxvii}

The goal of this Task Force is to *improve the understanding and recognition of, and respect for, cultural and spiritual values of Protected Areas, including community conserved areas, and promote the full integration of these values into policy, planning, management and evaluation, where appropriate.*

Faith groups: Neither mainstream nor most of the smaller faiths have detailed or specific guidance on their attitudes towards biodiversity conservation or protected areas, although there have been many individual attempts to pull together particular intra-faith frameworks from sacred writings and history and there have been some important individual pronouncements from significant religious figures.

^{xxxvii} See also one of the Task Force's initiatives, The Delos Initiative, which is focussing its attention on sacred natural sites in developed countries: <http://www.med-ina.org/delos/>

Some of these have been reviewed in Chapter 2. More significantly, there have been some efforts to link faiths and environmental issues, particularly by the Alliance of Religions and Conservation and a long exercise by Harvard University³²⁰. Significant statements about the spiritual importance of environmental protection have emerged, although most of these remain rather general.

Local communities: There is at present very little to help communities decide whether it is advantageous to try to get their sacred sites officially gazetted as protected areas, nor about the costs and benefits of protected area status. There is a plethora of tools available for assessment, planning and monitoring at a community scale, including participatory approaches, some of which are mentioned in the resources section below. Communities therefore have many resources to help them decide about issues relating to management but currently little guidance on how best to manage sacred sites.

Governments: While there are plenty of intergovernmental commitments relating to indigenous peoples, there has been little global attention to the interaction between faith and nature, with the important exception of the *Akwe Kon* guidelines described earlier. Two exceptions, which also provide a frame of reference for all the stakeholders mentioned above, are outcomes from the World Parks Congress and specific commitments within the Convention on Biological Diversity's *Programme of Work on Protected Areas*, both of which are described in greater detail below.

The World Parks Congress: Every decade, IUCN's World Commission on Protected Areas holds a World Parks Congress, assembling protected area professionals from around the world. Although without official power, successive WPCs have in effect set the global agenda on protected areas. The Fifth World Parks Congress included a stream on "Building broader support for protected areas", the participants of which drew up the 13th recommendation of the Congress, on cultural and spiritual values of protected areas. Significant selections from this thousand-word recommendation are given in the box below.

Edited selections from "**World Parks Congress Recommendation 13: Cultural and Spiritual Values of Protected Areas**"

ACKNOWLEDGE indigenous peoples' internationally guaranteed rights to, among others, own and control their sacred places, their archaeological and cultural heritage, ceremonial objects and human remains contained in museums or collections within or adjacent to protected areas. These include the following rights to:

- ✓ DEFINE and name their sacred places and objects...;
- ✓ Where relevant, MAINTAIN secrecy about and enjoy privacy in relation to their heritage, objects, remains and places as described above;
- ✓ RESTITUTION of sacred places, heritage, objects and remains taken without their free and informed consent;
- ✓ FREELY EXERCISE their ceremonies, religious and spiritual practices in the manner to which they are accustomed;
- ✓ GATHER, collect or harvest flora, fauna and other natural resources used in ceremonies and practices that take place at sacred places or archaeological and cultural heritage places; and
- ✓ MAINTAIN their responsibilities to their ancestors and future generations;

RECOMMEND governments to:

- ✓ PROMOTE and adopt laws and policies that acknowledge the importance of sacred places, particularly those of indigenous and traditional peoples, as valuable for biodiversity conservation and ecosystem management;
- ✓ ADOPT and enforce laws and policies that guarantee the restitution of sacred places as well as effective control and decision-making processes by local communities and indigenous peoples;
- ✓ PROMOTE and implement effective action to support community protection efforts in areas of cultural and spiritual importance including sacred places; and

FURTHER RECOMMEND governments, NGOs, local communities and civil society to:

- ✓ ENSURE that protected area systems, protected area designation, objective setting, management planning, zoning and training of managers...give balanced attention to the full spectrum of material, cultural and spiritual values;

- ✓ ASSIST indigenous and traditional peoples in obtaining legal and technical support related to protection of their sacred places when requested and in a manner that respects their rights and interests

REQUEST protected area managers to:

- ✓ IDENTIFY and recognize sacred places within their protected areas, with the participation and informed consent of those who revere such places, and to actively involve them in decisions regarding management and protection of their sacred places;
- ✓ SUPPORT the efforts of such communities to maintain their cultural and spiritual values and practices related to protected areas; and

Request the IUCN to review the 1994 Protected Area Category Guidelines with the aim of including these values as additional potential management objectives in categories where they are currently excluded.

The Convention on Biological Diversity: The WPC recommendations were fresh and rather visionary but they carry no “official” weight. A far stronger vehicle is provided by the Convention on Biological Diversity, whose *Programme of Work on Protected Areas* drew heavily on the outcomes of the World Parks Congress and carries additional weight because it is agreed by 187 governments around the World along with the European Union. The Programme of Work does not contain specific references to sacred sites, but several of the activities suggested to State Parties relate directly to the issues discussed in this report. The following table identifies some of these (omitting others that cover similar ground) along with our interpretations for how these might relate to the subjects discussed here.

No.	Action suggested to Parties	Relevance to faiths
1.1.4	By 2006, conduct, with the full and effective participation of indigenous and local communities and relevant stakeholders, national-level reviews of existing and potential forms of conservation, and their suitability for achieving biodiversity conservation goals, including innovative types of governance for protected areas that need to be recognized and promoted through legal, policy, financial institutional and community mechanisms, such as protected areas run by Government agencies at various levels, co-managed protected areas, private protected areas, indigenous and local community conserved areas.	Include analysis of sacred sites and other lands and waters influenced by faith groups to contribute to biodiversity conservation goals
1.1.6	By 2009, designate the protected areas as identified through the national or regional gap analysis (including precise maps) and complete by 2010 in terrestrial and by 2012 in the marine environments, the establishment of comprehensive and ecologically representative national and regional systems of protected areas.	Identify areas that would benefit the faith and conservation by being an official protected area
1.1.7	Encourage the establishment of protected areas that benefit indigenous and local communities, including by respecting, preserving, and maintaining their traditional knowledge in accordance with article 8(j) and related provisions.	Include in particular sacred sites of indigenous peoples
1.2.3	Integrate regional, national and sub-national systems of protected areas into broader land- and seascape, <i>inter alia</i> by establishing and managing ecological networks, ecological corridors and/or buffer zones, where appropriate, to maintain ecological processes and also taking into account the needs of migratory species.	Assess if sacred sites or other lands/waters influenced by faiths have biodiversity roles outside protected areas
1.2.5	Rehabilitate and restore habitats and degraded ecosystems, as appropriate, as a contribution to building ecological networks, ecological corridors and/or buffer zones.	Include faith lands that could benefit from restoration
1.4.1	Create a highly participatory process, involving indigenous and local communities and relevant stakeholders, as part of site-based planning in accordance with the ecosystem approach, and use relevant ecological and socio-economic data required to develop effective planning processes.	Include faith communities in planning all protected area networks
2.1.2	Recognize and promote a broad set of protected area governance types related to their potential for achieving biodiversity conservation goals in accordance with the Convention, which may include areas conserved by indigenous and local communities and private nature reserves. The promotion of these areas should be by legal and/or	Assess different governance approaches for sacred natural sites appropriate to the

No.	Action suggested to Parties	Relevance to faiths
	policy, financial and community mechanisms.	particular faith
2.2.2	Implement specific plans and initiatives to effectively involve indigenous and local communities, with respect for their rights consistent with national legislation and applicable international obligations, and stakeholders at all levels of protected areas planning, establishment, governance and management, with particular emphasis on identifying and removing barriers preventing adequate participation.	Include indigenous peoples in this assessment
3.1.2	Conduct national-level assessments of the contributions of protected areas, considering as appropriate environmental services, to the country's economy and culture, and to the achievement of the Millennium Development Goals at the national level; and integrate the use of economic valuation and natural resource accounting tools into national planning processes in order to identify the hidden and non-hidden economic benefits provided by protected areas and who appropriates these benefits.	Include faith groups in assessment of biodiversity conservation ideally through setting their own targets
3.2.2	Establish effective mechanisms to document existing knowledge and experiences on protected area management, including traditional knowledge in accordance with Article 8 (j) and Related Provisions, and identify knowledge and skills gaps.	Ensure that current knowledge is used effectively in management
3.3.1	Document and make available to the Executive Secretary appropriate technologies for conservation and sustainable use of biological diversity of protected areas and management of protected areas.	Collect experience in managing sacred natural sites and other faith approaches to protection (e.g. <i>himas</i>)

Table 7: Implications of the CBD Programme of Work on Protected Areas

Part 10: Conclusions and recommendations

This report has covered a great deal of ground, inevitably at a superficial level. We aimed to investigate the links between faiths, areas of sacred significance and protected areas, and to ask if and how spiritual aims could be integrated with those of biodiversity conservation. The following conclusions are backed up by recommendations about how these issues can be more fully addressed in the future.

Conclusions

- Faiths have been involved in some of the earliest forms of habitat protection in existence, both through the preservation of particular places as sacred natural sites and through religious-based control systems such as the *himas* system in Islam.
- A proportion of these sites (probably a large proportion) are also highly successful at conserving natural ecology and biodiversity.
- Links between faiths and conservation of land and water exist throughout the world and involve every faith system that we have examined.
- Many areas of sacred significance and faith-based land management systems are currently under threat, because of cultural breakdown, pressures on land and resources and poor governance that permits deleterious use.
- There is still a lot to be learned about where sacred sites exist, what level of risk they face and about exactly what relationship they have to biodiversity conservation.
- Sacred natural sites and other places of importance to faith groups exist as protected sites both inside and outside official “protected areas” as recognised by IUCN The World Conservation Union and the Convention on Biological Diversity.
- Bringing a sacred area into a national protected area system can increase protection for the site but sometimes at the expense of some of its spiritual values. The existence of a sacred site within a protected area can also create challenges for managers. But other cases show a good integration between the needs of faiths and conservationists.
- The spiritual values of a site are frequently not considered when planning conservation and conservationists (protected area managers, policy makers, and even NGO staff) often lack the skills or knowledge to deal effectively with sacred sites and the people for whom they are sacred.
- Sacred areas can usefully be integrated into protected area systems using any of the recognised management models and governance types and can be suitable for both large and small areas and for terrestrial and aquatic sites.
- Decisions about whether or not to seek to make a sacred natural site or other land or sea area important to faiths into an official protected area therefore need to be made on a case-by-case basis.
- Success in co-managing for faith and nature is almost always a matter of developing effective and trusting partnerships between the different stakeholders involved.
- Making such areas an explicit part of biodiversity conservation strategies has the additional and very important function of bringing conservation issues into the mainstream of thinking of faith groups.
- Further guidance is needed about how this integration can best be achieved, and some suggestions are outlined in the following section of recommendations.

Recommendations

- Many sacred natural sites can and should contribute to biodiversity conservation strategies, although whether this contribution should be inside an official protected area or as part of wider landscape / seascape conservation strategies needs to be determined for each case in turn.
- Given the influence of the faith communities, including direct ownership of land and resources, conservation organisations should be working much more closely with faith groups to identify ways of collaboration.
- Decisions about individual sites need to be taken by all the stakeholders – i.e. by faith groups depending on their own desires and perceptions of what impacts will affect the sacred nature of the site and by conservation specialists about whether the site will be a useful addition to protected area systems.
- By protecting natural areas with sacred significance we are also in many cases protecting a culture and traditions that have existed for centuries. For this reason, protection of sacred sites can sometimes be an effective way of also protecting a people, culture or ethnic group, while also recognising the role that they play in protecting nature.
- Where a sacred site exists within a protected area, the care of the site should always be an important element in management plans and practice.
- There is still much to be learnt about the links between sacred sites, biodiversity and protected areas and further research is required, particularly with respect to:
 - ✓ the location and status of sacred natural sites
 - ✓ the influence of mainstream faiths on land and water and options for conservation
 - ✓ the biodiversity value of sacred natural sites
- The value that protected status for sacred sites can bring to faith groups should not be neglected.
- Current guidelines are useful but remain general; further guidelines are needed specifically for major stakeholders, including faith groups, protected area managers and governments.
- Such guidelines need to be based on direct field experience and we propose the establishment of a learning portfolio of new and existing protected areas containing sacred natural sites, specifically looking at the challenges of managing for both values together.

Recommendations to WWF

WWF has long signalled its interest in linking faiths and nature³²¹, both philosophically and through practical projects. The organisation already has a wide range of projects that work directly with faiths.

This report, and the larger project looking at arguments for protected areas, seeks to build on and expand this experience to develop practical solutions to the challenge of establishing and maintaining an effective protected areas network. The following actions are suggested as a programme for developing the ideas and opportunities explored here.

Action		Partners
1	A call for the world's faiths to increase their contributions to the historic aim of completing an ecologically representative system of protected areas, by committing a proportion of the land and water that they own or control.	CBD, WCPA, World Bank and NGOs
2	A call to protected area managers and conservation organisations to recognize the significance and legitimacy of sacred values of nature, and to work cooperatively with faith organizations in ensuring that these spiritual and cultural values are also effectively preserved within protected areas.	Conservation NGOs such as The Nature Conservancy
3	Urgent development of capacity building material for both protected area managers and faiths with respect to the links between protected areas and sacred sites (e.g. PowerPoint presentations, teaching material etc).	Commission on Education and Communication
4	Testing of existing guidelines and where necessary development of more specific guidelines and case studies.	World Commission on Protected Areas
5	Development of a learning portfolio of sacred natural sites in protected areas to test out ideas of integrating sacred and biodiversity values.	Alliance of Religions and Conservation,
6	Encourage further Sacred Gifts for a Living Planet as a concrete demonstration of commitment to integrate spiritual and conservation values.	Faith groups, governments
7	Development of ecological monitoring in selected sacred natural sites to identify conservation benefits.	Faith groups
8	Policy advocacy to ensure that governments, protected area agencies and faith groups ensure that the maximum synergy is reached between protected areas and sacred natural sites.	
9	Assist with the refinement of the IUCN protected area categories, particularly category III, so that they match more effectively with the needs of faith groups and sacred sites.	World Commission on Protected Areas
10	Survey of how faith groups view the importance of the CBD commitments on protected areas and their own contribution.	ARC
11	Survey of Community Conserved Areas with links to sacred values in places where WWF works, including their potential within biodiversity conservation.	Commission on Environmental, Social and Economic Policy
12	Survey of WWF's own portfolio of projects to find out how many have links to sacred natural sites or to specific faith groups.	

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