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The Sacred Dimension of Protected Areas

Proceedings of the Second Workshop
of the Delos Initiative - Ouranoupolis 2007

Edited by Thymio Papayannis and Josep-Maria Mallarach



The Sacred Dimension of Protected Areas

Proceedings of the Second Workshop
of the Delos Initiative



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The Sacred Dimension of Protected Areas

Proceedings of the Second Workshop
of the Delos Initiative

Ouranoupolis, Greece, 24-27 October 2007

Edited by Thymio Papayannis and Josep-Maria Mallarach



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Opening message

HAH The Ecumenical Patriarch Bartholomew I



To the organizers and participants of the Delos2 Workshop, our beloved in the Lord: Grace be to you and peace from God.

It is with great interest that we learned of the Workshop you are organizing in Ouranoupolis in Northern Greece on 24-28 October 2007 in the framework of IUCN – The World Conservation Union. Its purpose of developing guidance for sacred natural sites in technologically developed countries is very close to our interests.

As you perhaps know, the Ecumenical Patriarchate has been teaching a responsible role of human beings towards Creation as its stewards and protectors. Through ecological symposia it has organized in the Aegean, the Black Sea, the Danube River, the Adriatic and the Baltic Seas, the Amazon River and the Arctic, the Ecumenical Patriarchate has brought together religious leaders from many faiths, scientists, conservationists, and the press in order to promote its message of responsibility towards the natural environment and life on earth in respect to its Creator.

We also noted with interest the focus of your Workshop on the careful management of monastic lands, as we believe that asceticism, which is at the core of monastic traditions, can teach us very useful lessons for the wise management of the Earth and of its resources.

Congratulating you on your efforts, we convey to you our patriarchal blessings and paternal prayers for a most successful and fruitful Workshop.

At the Patriarchate, 11 October 2007

Your fervent supplicant before God,

✦ BARTHOLOMEW
Archbishop of Constantinople,
New Rome and Ecumenical Patriarch



Opening statements

Dimitrios Tziritis

Father Gregorios

Welcome speech, Dimitrios Tziritis

Dear participants,

On behalf of the Prefect of Halkidiki, the Prefectural Board and the people of Halkidiki, it is my pleasure to welcome you all to Halkidiki. I would also like to say that we are delighted to see the 2nd Delos Initiative Workshop being organised in Halkidiki.

After years of unsustainable practices, the Greeks have realised the most self-evident truth: that nature is our society's main resource base and that our future well-being depends on the harmonious relationship between nature and humans. We really need to look back, learn

from past lessons and realise how very dependent we are on nature. We have to do that if we are to enhance our quality of life now and build more sustainable communities for the future.

Now is the time to act and introduce environmental mitigation – wherever that is possible – and preservation measures and techniques whose ultimate goal, of course, is our current and future sustainability.

As the Vice-Prefect responsible for Environmental Issues, I understand that our society has continuously and robustly demanded that its decision – and policy-makers – establish new and attainable targets, introduce new initiatives and boost its efforts to achieve the goals that we have collectively set.

Nevertheless, there are several stages in the struggle for environmental sustainability, which requires careful planning, informed decisions and dynamic implementation. Several areas of concern have distinct characteristics of their own, which give rise to specific and diverse problems that should be managed accordingly.

Mount Athos, the world's oldest monastic state, a unique site of historic, environmental and cultural importance, the exceptional and dominant 'Garden of the Virgin Mary', is located on the Halkidiki peninsula. The conservation and management of Mount Athos' natural and cultural heritage requires the

consideration of several topics, reflection on many important issues, contemplation of distinct aspects of sustainability and, ultimately, careful management.

In the days ahead, we will have the opportunity to progress on many vital issues regarding the conservation of the natural environment. Your ideas, reviews and criteria are important, and this makes the Delos Initiative a scheme of particular importance; we are glad, as the Prefecture of Halkidiki, to be actively participating in this initiative.

I would like to thank you again for hosting the event in Halkidiki and to wish you all the best. I look forward to seeing the results of your efforts.

Ivion Monastery, Mt Athos



Opening statement, Father Gregorios

On behalf of the Holy Community of Mount Athos, it gives me great pleasure and satisfaction to greet the Delos Initiative, which is under the supervision of Med-INA, and endorse its main objectives which are promoting environmental awareness, making rational use of natural resources and addressing the need to establish a more harmonious relationship between humans and the environment.

Further, the Delos Initiative examines the role that sacred places can play in environmental conservation, the protection of biodiversity and, ultimately, the sustainable management of our natural and cultural heritage.

The natural environment of Mount Athos with its rich fauna and flora, invaluable biodiversity and beautiful landscapes is indeed exceptional and unique. We are thus extremely grateful that Med-INA has included Mount Athos as one of the case studies in the Delos Initiative, since the region's cultural and environmental significance will be examined from a scientific point of view.

Briefly, it can be stated that the uniqueness of Mount Athos' natural environment stems, firstly, from the way of life of the Athonite monks, which is based on the wisdom of Orthodox Theology concerning the Creation and, secondly, from the self-government status of Mount Athos.

Since the time of the Creation, our merciful God has made Man capable of carrying out his role as the king of earth and let him use nature to satisfy his needs. In other words, nature should not be worshipped; at the same time, however, nor should it be overexploited. Athonite monks have always respected nature and used natural resources wisely and only to satisfy the bare necessities of life.

However, living a life based on the wisdom of Orthodox Theology is not enough in itself to preserve and sustain the natural environment of Mount Athos. The Holy Community should retain its self-governance, and Athonite monks should continue —through their theological quests— to be able to express their environmental concerns. These two points are core prerequisites for the development and implementation of an innovative strategy for the sustainable management of the natural environment of Mount Athos.

I should like to inform you that the Holy Community has taken the initiative in preparing a Special Environmental Study that aims to raise environmental awareness and promote the Athonite Environment. Our dear friend Mr Ioannis Philippou, Professor of Forestry at the Aristotle University of Thessaloniki, will be presenting its salient points.

I would like to finish by conveying our best wishes. We hope that the Delos Initiative will meet its aims and objectives for Nature and for Man.



Introduction

Thymio Papayannis and Josep-Maria Mallarach

Sacred natural sites and the Delos Initiative

As environmental problems continue to increase at an ever more rapid rate, exacerbated by the major threat of global climate change, the need for widespread remedial action is becoming ever more pressing. Scientific consensus on both the root causes of these problems and the measures required to tackle them is growing, while mass media and public interest has reached fever pitch. Of course, while this has put pressure on decision-makers to take positive action, the realisation of the gravity and extent of the environmental problems has encouraged all those concerned about the state of our world to search for partners around it: one such significant partnership to emerge in

recent years is between those concerned with the conservation of nature –and of its biodiversity– and the custodians of sacred sites, representing both indigenous beliefs and mainstream faiths.

Natural sites are defined as those that maintain a significant degree of biodiversity and therefore merit protection status, whether local, national or international. Such sites are usually part of protected areas and benefit from active management of some kind; although this can be applied through a wide range of means, in technologically developed countries such management tends to be in the hands of special management bodies –whether governmental services or NGOs– or even local communities¹.

1 As is often the case in Community Conserved Areas (CCAs).

However, the existence of protected areas is probably as old as the history of humanity. In many parts of the world, natural sites have acquired spiritual significance through the ages for indigenous peoples, local communities or particular mainstream faiths and groups of believers. In addition, some sites which were sacred to now defunct societies, while still meriting a degree of respect, have maintained only their historical and cultural value.

As a result, most technologically developed countries have a multitude of diverse and complex natural sacred sites, which connect ancient and modern spiritual traditions through history: sacred landscapes relating to prehistoric cultures with tangible traces, like rock paintings or labyrinths, or without them; sacred sites related to 'dead' historic cultures from megalithic civilisations onwards, some of which have been reviving in recent times in certain regions or are well-documented by traditional literary sources like epics or sagas; sacred sites relating to living indigenous spiritual traditions; sacred sites and pilgrimage routes related to long-established living mainstream religions; and new sacred sites related to either recently-established mainstream religions or mainstream religions recently established in a new geographical location: e.g. Buddhism in Europe.

Characteristic examples of natural sacred sites related to prehistoric cultures include Stonehenge in England, Carnac in France and the megalithic structures on the islands of Malta and Minorca. Sacred sites related to indigenous living

traditions are markedly present across North America (First Nations), Australia (Aborigines), New Zealand (Maoris), Russia, northern Scandinavia (Sami) and a few other European countries like Estonia. Sacred sites related to ancient historic religions occur frequently in the Mediterranean Basin, with examples including Delos, Delphi and the Parthenon on the Athens Acropolis². Sacred natural sites related to Christianity are still frequent in most countries where the Orthodox and / or Catholic faiths are or have been the principle religions, and usually relate to places where holy people lived or were touched by celestial beings. There are also a number of related examples of living pilgrimages, including the Camino de Santiago de Compostela (Way of St James) in northern Spain, France and Portugal; the Via Laurentana in Italy; El Rocío in Spain and Saintes-Maries-de-la-Mer in the Rhône Delta, France.

The sanctity of a site is usually related to the integrity of its natural features, which is to say that it is normally compatible with the requirements of nature conservation. In fact, many countries first sought to establish natural protected areas because of sacred sites or pilgrimage paths. For instance, the largest concentration of Biosphere Reserves in Europe is related to the Camino de Santiago in Northern Spain. However, this can lead to conflict stemming either from the pressure put on the natural environment by large numbers of pilgrims and / or visitors, or from protected area managers affording insufficient recognition to spiritual or religious values and their require-

2 Dedicated to the goddess Athena.



The participants at the Delos2 Workshop

ments. In old sacred sites located within modern protected areas, the lack of a common language shared by custodians and managers has proven to be an obstacle to co-operation.

Preventing and resolving such conflicts is one of the missions of the Delos Initiative, which attempts to encourage synergy through collaboration between custodians of sacred sites and managers of protected areas. Established in 2004 within the framework of the Cultural and Spiritual Values of Protected Areas (CSVPA) Specialist Group of the International Union for Conservation of Nature (IUCN), the Delos Initiative focuses on sacred natural sites in technologically developed countries. As such, it concerns itself with sites that are significant for indigenous peoples in Australia, Canada, the United States and elsewhere, as well as sites recognised by mainstream faiths including Buddhism, Christianity, Islam and Judaism.

The Delos Initiative was named after the Aegean island of Delos, a spiritual centre

of the ancient Greek world. Jointly coordinated by Thymio Papayannis and Josep-Maria Mallarach and supported by Med-INA and Silene, its core methodology is the study and analysis of carefully selected case studies from around the world from which experience can be gained and lessons learned. Its first Workshop was organised in October 2006 at the Monastery of Montserrat, which is located within a nature reserve in Catalonia, Spain. The Workshop's proceedings were published in 2007.³

Ouranoupolis Workshop

In October 2007, the 2nd Delos Initiative Workshop was held in Ouranoupolis⁴, a location chosen for its proximity to Mt. Athos, Eastern Orthodox Christianity's

3 Mallarach, J.-M. and Papayannis, T. (eds.) (2007), *Protected Areas and Spirituality, Proceedings of the First Workshop of the Delos Initiative, Montserrat 2006*, Gland, Switzerland: IUCN and Publications de l' Abadia de Montserrat.

4 Held at the Eagles Palace Hotel, on 24-27 October 2007.

most celebrated monastic centre for over a thousand years. Ouranoupolis is a small town in the North of the Athos Peninsula but outside the borders of the Holy Mountain territory, to which women are not permitted entry.

The 22 participants at the Workshop included religious leaders, academics and conservationists from 11 countries and four continents (see Appendix 1).

The Workshop was divided into three parts: The first concerned the presentation and critical discussion of new case studies relating to both the spiritual traditions of indigenous peoples and to mainstream faiths which were not presented at the first Delos Workshop. The second theme focused on the management of monastic lands, with examples drawn mainly from the Northern Mediterranean. Finally, the last day of the Workshop was dedicated to examining and discussing general issues relating to the provision of guidance to sacred natural sites, and to the future orientation and planning of Delos activities.

The main results of the presentations and discussions were summarised in the Ouranoupolis Statement (p 249), which was subsequently translated into the IUCN's other official languages and widely disseminated through the appropriate networks and the Delos Initiative webpage at <http://www.med-ina.org/delos>.

Workshop participants then visited monasteries in Meteora, Thessaly, the Ormylia Monastery in Halkidiki, the Vergina archaeological site and the Byzantine Museum of Thessaloniki.

The Delos2 Workshop proceedings

The proceedings are organised in the same way as the Workshop.

They start with the blessing of His All Holiness the Ecumenical Patriarch and opening statements made by the representatives of the Holy Community of Mt. Athos and the Prefecture of Halkidiki. These are followed by three distinct sections dealing with i) the presentations of the new case studies, ii) the management of monastic lands, and iii) general issues and the future orientation of Delos activities.

Part One: An overview of the case studies

Indigenous sacred sites

Following the introduction and opening speeches, Part One of the Workshop proceedings includes two case studies relating to indigenous peoples in Australia and the United States of America respectively, and four case studies relating to mainstream faiths (Buddhism, Christianity and Islam) in Italy, Morocco, the Russian Federation and South Korea.

The Dhimurru Indigenous Protected Area is located in Northeast Arnhem Land, Australia, and is comprised of several smaller sites. Yolngu, the Aboriginal people that inhabit the area, have a cultural obligation to manage their lands with respect to their ancestral traditions, applying effective conservation techniques that have in all likelihood ensured their existence for more than 50,000 years. The highly complex practices are



Meteora, Greece

handed down from one generation to the next through cultural transmission. Dhimurru is an example of a protected, sacred natural area for which indigenous people have sole management responsibility. They have chosen to educate the public through paintings, stories and songs.

The Sacred San Francisco Peaks have been held sacred and accessed for specific religious purposes for many centuries by 22 Native American Nations. Commonly known as Dooko'oo'sliid, these peaks are recognised by the Navajo people as a female life form, a source of medicinal and ceremonial plants and minerals, and a place of spiritual nourishment. High precipitation, several altitudinal vegetation zones, its varying directional orientation and a myriad of microhabitats make the mountain range a haven of biodiversity. The most serious threat to the natural and spiritual / cultural values of the Peaks is posed by plans to build a ski resort on its southern slopes, which include the use of

wastewater for effluent snow. In an effort to save the Sacred Peaks from profanation, 13 tribes have formed the Save the Peaks Coalition to fight unwanted development projects in the courts.

Sites sacred to mainstream faiths

The National Park of the Casentine Forests, Mount Falterona and Campigna, extends along the ridge of the Tuscan-Romagna Appenine in Italy. The Casentine Forests are part of a National Park that covers around 36,000 ha. The Park hosts a large number of plants and herbaceous species and is also rich in fauna, both mammals and birds. The area's main sacred sites are the Benedictine Hermitage and Monastery of Camaldoli, and the Franciscan Sanctuary of La Verana. People have lived and worked in this landscape for many centuries, and ruins and abandoned villages are still frequent within the park. Tourism has become an important source of revenue for the area, but has also had a major impact both on the forest and on the religious values of

the park. Marked benefits would thus accrue to forming and supporting an integrated approach for the entire area, which would protect the region's natural, cultural and spiritual heritage without compromising the future of its tourist industry.

Jabal La'lâm [Mount of the Signal] is situated at the heart of the Jabal Bouhachem region in the Rif mountains of Morocco. The spiritual importance of the site derives from the presence at its peak of the famous tomb / sanctuary of 'Abd al-Salâm ibn Mashîsh, a holy man who withdrew there eight centuries ago. National forest legislation and the existence of a 'hurn' —an Islamic traditional protected area— guarantee to a certain degree the conservation of the natural heritage. The oak forests as well as the numerous species of mammals and birds, quite a few of them endemic or endangered, attest to the site's biological and ecological significance. Degradation caused by the vast number of pilgrims who visit the open-air sanctuary to pray

is apparent. Some environmental damage is also a result of the traditional markets that operate in the locality.

Mount Mani-san on the island of Ganghwa-do near the capital of South Korea is considered one of that country's most sacred mountains due both to its beautiful landscapes and magnificent views of the sea and —still more significantly— to the fact that Dangun (the legendary founder of the Korean nation) allegedly constructed a stone altar on Mani-san's Chamseongdan peak over 4,000 years ago and performed the first celestial offering. While Mount Mani-san has a unique ecosystem —it is the home of many migratory birds, well preserved forest, etc.— its tideland is in great danger. The most serious conservation threats are posed by the large number of visitors and by several development projects planned for the region. The local government has announced several ambitious plans to reclaim the tideland, to build a thermal power plant and to transform the area into a tourist resort.

Orchards in Vatopedi Monastery, Holy Mountain



The Solovetsky Islands lie in the middle of the White Sea, 165 km South of the Arctic Circle in Northern Russia. The unique archipelago in the European Part of the Arctic Ocean is comprised of over one hundred islands. The Solovetsky archipelago contains sub-tundra and forest-tundra ecosystems, crooked forests, numerous endemic species and a complex of small lakes. Many different cultures have regarded the Solovetsky Islands as sacred down the ages, while some of the islands number among Orthodox Russia's most sacred places. The monasteries, which were restored after the Communist era, and the increasing number of pilgrims who visit the islands every year, are gradually becoming a significant factor in the life of the local community.

Part Two: Management of monastic lands and facilities

Part Two includes case studies relating to Mount Athos and other monastic communities in Rila (Bulgaria), Catalonia (Spain), Crete (Greece) and the Southern Carpathians (Romania).

At the end, a short paper attempts to draw conclusions and lessons from these presentations.

The Athos Peninsula is the Easternmost of the three peninsulas in Halkidiki, Greece; it is roughly 60 km long. The Holy Mountain is inhabited by a society of Monks who have devoted their lives to the worship of God and is a sacred site of global significance. It is a Natural and Cultural World Heritage Site and part of Europe's Natura2000 network. The Holy

Community of Mount Athos has successfully implemented a LIFE project relating to the rehabilitation of coppice *Quercus frainetto* and *Quercus ilex* to high forest, and has conducted a strategic Special Environmental Study to identify and list the management measures required to protect and restore the entire peninsula with all its biotic and abiotic constituents, while promoting a development model compatible with the environmental and economic concerns of the local community. Athos' mountain landscape features diverse vegetation and a complex and profoundly beautiful topography, which has been preserved by an orthodox Monastic Community for over a millennium. The monastic life style is characterised by temperance, silence, the careful use of natural resources and a concern for conservation. The need for special landscape conservation actions emerged after the wildfire of 1990 and the road network that has since been developed.

Buila Vânturarița is a small Romanian national park in the Southern Carpathians. The Park has three levels of vegetation –the deciduous, the boreal and the sub-alpine– and boasts flora including many endangered, rare and endemic species. Carpathian fauna is also well represented. The area is also known as the 'mountain of the monks', and there are six Orthodox monasteries and sketes within the Park, its only permanent human settlements. The monasteries, situated at the start of the tourist trails, form a circle around the National Park and are considered its spiritual guardians. The cultural values of the area are

strongly related to the presence of these Christian Orthodox monasteries of which the Bistrita Convent, built by the Craiovesti boyars, is the most famous. Libraries and museums dating back to the 15th century can also be found there. The main economic activities are wood harvesting and stock raising. An integrated approach is, perhaps, the most effective strategy for preserving the natural and cultural character of the area and maintaining strong spiritual links between Man and Nature.

The Monastery of Chrysopigi in Chania, Crete is dedicated to the Mother of God, the Life-Giving Spring. Since the 16th century, it has been a source of spiritual and social support for the people of the island. The land around the Monastery is currently given over to cultivation using organic farming methods. The monastery's estate has been designated a protected area and is home to a variety of plants and trees, some of which are used in pharmaceuticals. Apart from its environmental significance, the archaeological and historical value of this biotope are substantial. Further plans for the conservation of the area should focus on both its natural and spiritual heritage.

The Cistercian Monastery of Santa Maria de Poblet is located in Southern Catalonia. It was well known throughout Western Europe during the 13th-15th centuries for promoting advanced sustainable techniques in agriculture, forestry and animal husbandry. The monastery was severely damaged and its forest razed to the ground during the social turbulence of the 19th century, but the monastery and

its surrounding forest were restored during the 20th century. More than 150,000 people visit Poblet Monastery every year, the majority of whom are attracted by its cultural heritage. The main natural significance of the Park is linked to the surrounding Mediterranean forests. In 1984, the area around the Monastery was declared a Natural Site of National Importance. The monastic community has undertaken several initiatives which aim: i) to improve the environmental management of all the Monastery's facilities and lands, ii) to promote the effective protection of the rural landscape around the Monastery and iii) to develop a strategy for raising its visitors' environmental and spiritual awareness.

Rila Monastery was founded by Saint Ivan Rilsky in the early 10th century. Rila, which lies in the heart of a magnificent mountain massif, is Bulgaria's holiest site. Several other sacred places are located around the Monastery, including holy springs, the sacred cave of the founder and five hermitages. The Natural Park, which nestles within a larger national park, is home to a variety of distinct ecosystems and spectacular mountain landscapes, lakes, old forests, and a number of endemic plants. The local fauna is extremely diverse and includes significant wolf and brown bear populations. The main goals of the 2003 management plan include conserving the area's spiritual, cultural and natural heritage; managing natural resources in relation to tourism; raising awareness through educational schemes and co-ordinating the activities of the Orthodox Church and state

institutions. These goals, which underline the strong relationship between the monastic community and the natural environment, seek both to sustain the multifaceted role of the nation's most important cultural and spiritual centre, and to preserve the unity between the monastery and nature.

Sakya Tashi Ling is a modern Buddhist monastery located in El Garraf Park near Barcelona in Catalonia, Spain. The property of the Sakya Tashi Ling Monastery is of significant natural, cultural and spiritual value. The monastic community's repeatedly expressions of interest in improving the management of the natural area surrounding the Sakya Tashi Ling Monastery have resulted in the drafting of a management plan, which seeks to integrate the scientific conservationist and traditional Tibetan Buddhist world-views. The Buddhist monastery is currently the Park's main attraction, with visitors attracted by the activities and courses offered by the monastic community and by the cultural significance of the Palau Novella building, in which the community lives.

Part Three: Achieving synergy between spiritual and conservation concerns

Part Three begins with a summary of the efforts made to provide guidance to the managers, custodians and administrators of sacred natural sites. The specificities of sacred natural sites in developed countries are explored in a second paper, which is followed by 'Some thoughts on sacred sites, faith communities and indigenous peoples' and concludes with

a presentation of the ecological activities of the Ecumenical Patriarchate across a large part of the globe.

Working under the auspices of the IUCN World Commission for Protected Areas (WCPA), the IUCN Cultural and Spiritual Values of Protected Areas Specialist Group has prepared a set of Guidelines for Protected Area Management on Sacred Natural Sites. The guidelines emerged out of a number of meetings organised since 1998 by UNESCO and the IUCN in India, Mexico, China, South Africa, Japan, the United Kingdom and –now– Greece. The drafting process began in 2003, and a preliminary set of working guidelines was posted on the Internet in 2005 and subsequently published by UNESCO. Although the guidelines focus on sacred sites relating to indigenous peoples, they are just one manifestation of the greater recognition being afforded to historical and contemporary conservation efforts rooted in an appreciation of the natural world initiated by numerous communities across the globe. The Guidelines were launched in Barcelona at the IUCN World Conservation Congress in 2008⁵.

The next paper examines the specificities of sacred natural sites in technologically developed countries. The specific characteristics of these sites are significant for both mainstream religions and indigenous peoples, and as such their management and conservation are examined within the context of broader global socio-economic and spiritual trends.

5 Wild, R. and McLeod, C. (eds.) (2008) *Sacred Natural Sites: Guidelines for protected Area Managers*. Gland, Switzerland, IUCN.

Several general recommendations are put forward, which are relevant to both.

The complex issue of indigenous and traditional peoples and communities in developing countries is addressed by the paper Some thoughts on sacred sites, faith communities and indigenous peoples. Through many years of IUCN work around the world, it has become obvious that indigenous faiths suffer substantially less in developed than in developing nations, where the traditional peoples and cultures are more numerous, the areas involved much larger and the scale of the problems consequently much larger. As a result, the prospects for traditional spirituality are anything but bright. In addition, there are frequent conflicts between indigenous groups and institutionalised religions that result in the harassment and persecution of the former, which can jeopardise the very survival of traditional cultures. Moreover, the critical issue of indigenous peoples having lost their rights of tenure and of managing indigenous sacred

sites remains unsolved in the majority of developing countries. Since all lands within protected areas in Latin America, Asia and Africa are state lands, the rights of indigenous and traditional peoples to their sacred sites cannot be restored. The ongoing degradation of traditional institutions in developing countries, which began during the colonial era is another major problem, exacerbated by a refusal to recognise indigenous spirituality as legitimate. It is thus absolutely crucial that mainstream religious institutions become more open, ecumenical and tolerant and abandon their colonial attitudes towards indigenous spirituality, which include their continued efforts to convert indigenous people to institutionalised religions.

In recent years, numerous environmental organisations have turned to religions in search of allies in their nature conservation and environmental action. Environmental action by the 'green' Ecumenical Patriarch has been particularly noted and appreciated. The Ecumenical Patri-

The Delos2 Workshop



arch Bartholomew is known for his work in promoting sustainability, and he is without doubt the most active environmental leader within the Christian Church. The Ecumenical Patriarchate's greatest contribution to the global effort for environmental protection and conservation has been the series of important international symposia organised by the Patriarchate aboard ships navigating environmentally 'troubled' waters in significant ecosystems. Through these high-profile symposia, the Patriarchate has addressed world leaders and brought together science, academia, politics, civic society and religion. Aiming to unite the world's Christian churches and galvanise them into an active response to

the global environmental crisis, the Ecumenical Patriarchate has also organised a series of summer seminars at the Theological School of Halki. The Halki Ecological Seminars were initiated in collaboration with WWF International and brought scientists, theologians, environmentalists and Church leaders together to jointly explore and promote commonly acceptable solutions to a series of environmental-related issues. In so doing, the Orthodox primate is promoting a new and greener way of life for the world's 300 million Orthodox Christians which, according perfectly with the oldest of the Christian traditions, encourages a genuine life-long association of Christianity and the environmental cause.



Part One

Analysis of case studies

- Indigenous peoples
- Mainstream faiths

SITE OF SIGNIFICANCE

WITHIN THE ZONE DEFINED BY SIGN-
POST'S IS A SACRED AREA OF UNIQUE
SIGNIFICANCE TO ABORIGINAL PEOPLE.

UNDER SECTION 69 OF THE ABORIGINAL
LAND RIGHTS (NORTHERN TERRITORY)
ACT 1976. UNAUTHORISED ENTRY ON A
SACRED SITE CARRIES A PENALTY OF
\$1000.

IF ACCESS IS REQUIRED, THE ABORIGINAL
OWNERS CAN BE CONSULTED.

BY REQUEST OF TRADITIONAL OWNERS.

Power on this land; managing sacred sites at Dhimurru Indigenous Protected Area

Northeast Arnhem Land, Australia

Bas Verschuuren

Mawalan II Marika

Phil Wise

Introduction

This case study outlines Dhimurru's experience with the management of their sacred natural sites which, in this article, will be referred to as sacred sites. It begins with a general introduction and then proceeds to explain in greater detail Dhimurru's experience with managing sacred sites using the two examples of Nhulun and Muruwirri. Nhulun provides a good example of fostering cross-cultural learning and signifies the importance of sacred sites to the land rights movement. Muruwirri highlights lessons learned from sacred art and modern science-based exercises for mapping the coastal and marine environment which is also termed the 'sea country'.

Like all aboriginal cultures, Yolngu aboriginal culture is rich in spiritual values.

Just as the Yolngu make no distinction between 'land' and 'sea', there is no separation between these values and the environment. Hence their use of the term *sea country* for the coastal habitats of their clan estates, and their referring to themselves as *saltwater people* (Memmot 2004, Verschuuren 2006, Yunupingu 2007). This unique integrated approach to cultural and natural values is better understood when cultivating a deeper understanding of the tangible and intangible importance of Yolngu values.

The cultural connection with the land is a sacred one encompassed by the relationships between *Rom* (law / protocol), *Manikay* (song / ceremony) and *Miny'tji* (art) (see glossary). This may be easier to understand in the light of Graham's in-

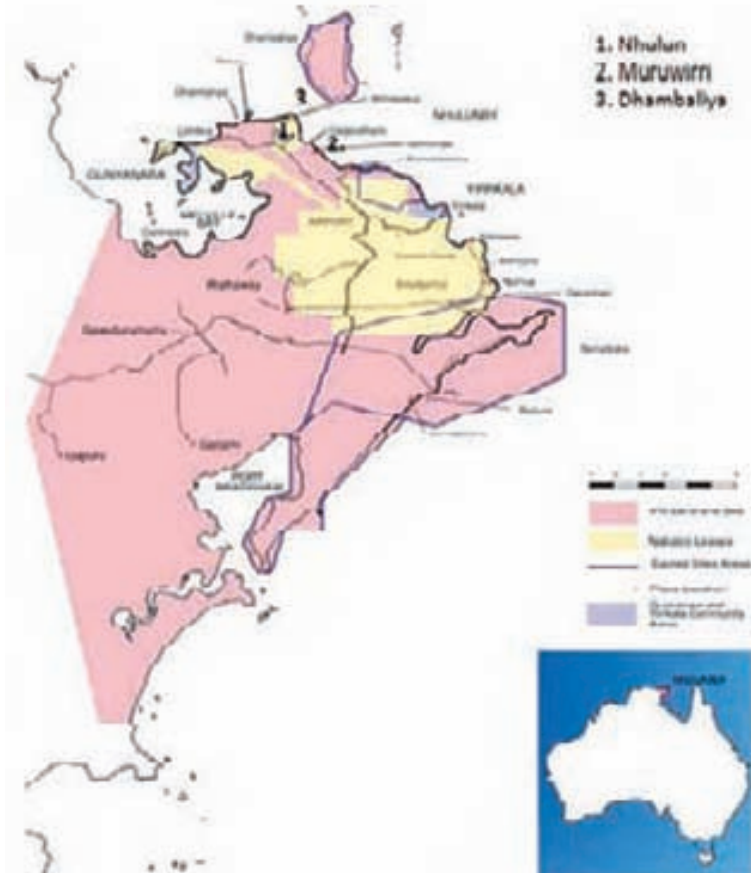
sights into the philosophical underpinning of Aboriginal worldviews (2008):

“The land, and how we treat it, is what determines our human-ness. Because land is sacred and must be looked after, the relation between people and land becomes the template for society and social relations. Therefore all meaning comes from land.”

Learning from Dhimurru’s experiences with managing sacred sites entails famil-

iarising oneself with the endogenous approach Dhimurru has taken. It involves making an effort to understand management from *within* a culture. Based on this, Dhimurru has developed the *Both Ways* approach which will be detailed further throughout this article, as we illustrate how cultural and spiritual significance help guide management actions for the conservation and protection of sacred sites.

Map of the Intigenous Protected Area with sacred sites marked



Location

The Dhimurru Indigenous Protected Area (IPA) is located in Northeast Arnhem Land Australia. Located on Aboriginal land, the Dhimurru IPA surrounds Nhulunbuy, the Northern Territory's fourth largest city. It is named after the sacred hill of Nhulun at whose base the mining town is built. The IPA also includes Dhambaliya (Bremer Island) off the shore to the North of Nhulunbuy. The IPA covers a total terrestrial area of c.92,000 ha with an additional 9,000 ha of coastal waters bounded by Nanydjaka (Cape Arnhem), Yalangbara (Port Bradshaw), Djuwalpawuy (Mount Dundas) and Dhambaliya (Smyth 2007). To the North and East, the Dhimurru IPA is bordered by the sea; to the South, its sea estate and lands are bordered by Laynhapuy IPA and managed by the Yirralka rangers at Laynhapuy Homelands who, like Dhimurru, have united the management of their Homelands.

The sites referred to throughout this article have been indicated on the map (in p. 28). They cover both land and sea and are populated in varying densities. These sites are known to Yolngu as: Nhulun (Mount Saunders) and Muruwirri and Dhambaliya Channel (Lonely Rock and Bremmer Channel).

Dhimurru, the organisation

Yolngu cosmology is divided into two moieties called *Yirritja* and *Dhuwa*. Like Ying and Yang, *Yirritja* and *Dhuwa* include people, plants, animals and land. *Yirritja* and *Dhuwa* are part of Dhimurru through

the collaboration of *Yirritja* and *Dhuwa* clans. Dhimurru itself was founded in 1992 and is governed by the Dhimurru Executive Board, which consists of 20 representatives —mostly Traditional Owners (see glossary)— from the traditional clan estates that comprise the Dhimurru IPA (officially declared in 2000). The Dhimurru Executive board is advised by the Dhimurru Advisory Group, whilst the Dhimurru staff implement the management plan and related conservation projects.

Natural and cultural heritage values within the Dhimurru IPA are managed from within the cultural worldview of the Yolngu people, and therefore strive to be treated inclusively. From this position, the Yolngu people have developed partnerships and working relationships with various conservation, government and scientific institutes. Although the management approach to the land is always based on a Yolngu perspective, Dhimurru fosters different ways of understanding the unique natural heritage in the IPA. To this end, a unique *Both Ways* management approach has been established. The *Both Ways* management approach stems from the need of Yolngu people to seek greater recognition for their culture than that which could be asserted through a joint management agreement of the sort initially proposed by the Australian Government. Dhimurru provides an example of a protected area whose management is entirely the responsibility of Indigenous people, who have chosen to exercise that responsibility by negotiating partnerships with governmental and non-governmental organisations (NGOs) to produce an alterna-

tive to joint management (Smyth 2007). The IPA is a voluntary management agreement with the Australian government, which closely resembles Indigenous and Community Conserved Areas (ICCA) or the World Conservation Unions' (IUCN) Category V. The Yolngu Plan of Management recognises Yolngu values, natural heritage values and other community values (Dhimurru 2000).

Natural values

As explained earlier, the meaning of natural heritage is defined from a Yolngu cultural perspective, in which cultural and biological values have been inextricably linked since time immemorial (Posey 1999, Hutcherson 1995, Dhimurru 2006a). To Yolngu people, the reciprocity of these values is evident. Yolngu people have always been concerned with educating *Balanda* in this interconnectivity, as illustrated by a statement in Dhimurru's sea country management plan:

"We have always known that we have some of the most culturally and ecologically significant shores and sea country in Australia. Finally, it seems the non-indigenous world has caught up".

The Plan further describes Yolngu's intimate knowledge of the sea from their perspective as saltwater people:

"Our marine estates include islands, rocky and coral reefs, inlets, bays, estuaries, mudflats, underwater springs, sea grass meadows, mangrove forests, the sea bed and open ocean. We share our sea country with marine creatures including fish, whales, dolphins, crustaceans, corals,

dugongs, turtles, shellfish, crocodiles and sea and water birds. We can describe and name in detail coastal, underwater and offshore features. We know and understand in detail the behaviour and habitat of marine life". (Dhimurru 2006a)

Yolngu have a rich culture with a profound understanding of nature. They have been exposed to European values since 1935, when a Christian mission was established at Yirrkala: the young people of that time are the elders of today. Since then, they have seen modern science explore their culture and the natural environment of their clan estates. After early explorers like Charles Darwin and Matthew Flinders mapped waters and coastline, various overland expeditions surveyed the natural environment of Northeast Arnhem Land. The collections of such expeditions are on display in museums around Australia. One such collection is the Donald Thompson Collection at the Victoria Museum (Thomson 1983) from the 1948 American-Australian Scientific Expedition to Arnhem Land.

The Yolngu are interested in deepening scientific understanding and integrating it into the day-to-day cultural management of their land and sea estates. Several scientific studies have been undertaken in collaboration with Dhimurru. Both Dhimurru and the Northern Territory Parks and Wildlife Service (PWNT) has successfully applied the *Both Ways* approach in training Yolngu to assist in inventory and monitoring programmes covering macropods, insects (notably the endemic Gove butterfly), mammals, fish, reptiles and plants. However, the unique and pristine environment remains

relatively unexplored by modern science. Two weeks of collecting insects generated extensive material including the discovery of species previously unknown to modern science. In addition, the Yolngu Plan of Management (Dhimurru 2000) recognises specific natural heritage values which, following Smyth (2007), include: high plant diversity and intact faunal assemblages; coastal regions not represented in any other protected area –the largest Quaternary dune system on the Northern Territory mainland, for instance; and significant feeding habitats and nesting sites for seabirds, migratory birds and threatened species of marine turtle and dugong (Smyth 2007).

The marine turtle and the dugong are of particular cultural interest to Yolngu people. Seven species of turtle occur in Dhimurru IPA, six of which are known to nest there: the Olive Ridley (*Lepidochelys olivacea*), Hawksbill (*Eretmochelys imbricate*), Leatherback (*Dermochelys coriacea*), Loggerhead (*Caretta caretta*), Flatback (*Natator depressus*) and Green turtle (*Chelonia mydas*). Marine turtles are in decline in most parts of the world and are included in the IUCN Red List. Dhimurru has learned from other monitoring studies how to put effective management practices in place to help declining populations recover. Such management practices include protecting habitat (through Dhimurru's permit system and patrols), advocating the use of Turtle Exclusion Devices in fisheries and ensuring that the traditional harvest of eggs and turtles is sustainable (through the Sea Country Management Plan). The dugong (*Dugong dugong*: the sea cow) also occurs in the Dhimurru IPA, al-

though numbers are known to be kept low by the limited availability of sea-grass (*Halophila ovalis* and *Halodule uninervis*) feeding grounds.

Cultural and spiritual values

Since Dhimurru is an Aborigine-owned organisation looking after aboriginal land, their management practices are subsequently based on cultural values. To Dhimurru, therefore, the whole landscape is regarded as culturally significant, with specific sacred places and species on it, which can be said to embody special spiritual connections to the ancestral beings that created the land in a period called 'the Dreamtime'. According to Rose (1998), the concept of Dreamtime is very real to Aboriginal people and often hard to understand for English-speaking people, because there is no adequate translation into English. The ancestor beings –*Wangar*– created the landscape and sang it –with the rocks, lakes, trees, sea and animals alive within it– into being. This means that Aboriginal people are spiritually connected to the landscape, but also to specific plants and animals. The *Manikay* songs of the ancestors are records of their travels as they created the land, and they have been passed on from one generation to the next since time immemorial (Morphy 1991, Chaloupka 1993, Memmot 2004). As the ancestors laid down the law (*Rom*), the songs, stories (*Dhawu*), art (*Miny'tji*), dance and musical instruments form a unique and powerful medium through ceremony (which outsiders call *corroboree*) and guide Yolngu life (Morphy 1998). This means of



Newspaper clipping relating to the first protest ceremony in the 1960s

communicating cultural and spiritual values is widely recognised by society as a highly influential and powerful medium for educating and influencing people. Yolngu people today still practice their heritage in this traditional way, using it to enrich and strengthen their land and sea management practices. The following sections will detail the cultural significance to the Yolngu of the two sacred sites, and the role Dhimurru plays in managing them.

A history of land rights at Nhulun (Nhulun lookout)

Nhulun is a natural hill and a sacred site enclosed on three sides by the Nhulunbuy Township, which is home to over 4000 residents. It was at the centre of the first legal claim made for Aboriginal traditional ownership of land and customary law, a legal action which ultimately resulted in the passing of the Aboriginal Land Rights Act (ALRA, 1976). It can thus be said that the struggle for land

rights began when this sacred site was damaged by road works (see image in p. 32). A protest ceremony (the *Galtha Bunggul*) was held on the damaged site (Dhimurru 2007) prior to the Yolngu people creating a statement of their 'title deeds' glued onto a bark painting (commonly known as the Bark Petition) and presenting it to the Australian House of Representatives in 1963. The Bark Petition made particular reference to the sacredness of the land:

"...That the land in question had been hunting and food gathering grounds for the Yirrkala tribes from time immemorial. That places sacred to the Yirrkala people, as well as vital to their livelihood are in the excised land. That people feel that their needs and interests will be completely ignored as they have been ignored in the past." (from Hutcherson 1995).

The Federal Court initially rejected the claim, upheld the hypothesis of *Terra Nullius* (meaning 'empty land', a Latin



Re-enactment of the Galtha Bunggul in 2007

dictum legally applied to claim a territory under public law) and did not recognise Yolngu law or the Yolngu people as Australian citizens. However, the Royal Commission advised that the Nabalco mining company and the Commonwealth had wrongfully entered Aboriginal land on the basis of leases initially granted by the Commonwealth. This ruling resulted in the ALRA, which has allowed approximately 50% of Northern Territory land to be handed back to Traditional Owners since 1976.

Traditionally, Nhulun is a sacred site relating to a 'sugarbag' dreaming, the maternal birthplace of the wild honey or sugarbag produced by native bees and considered a delicacy among Yolngu. Nhulun is a registered sacred site under the 1989 Northern Territory Sacred Sites Act (1989) as well as a recreational area. A sealed road provides access for motor vehicles to a steel watch tower (Nhulun lookout) overlooking the surrounding lands. The lookout has been provided with signs explaining the cultural and

spiritual values of the sacred site as well as its importance to the land rights movement. The signs include a timeline covering these events chronologically from a Yolngu perspective, and is a good example of Dhimurru's strategy of promoting reconciliation and cultural understanding through the interpretation of Yolngu beliefs and values to visitors (Smyth 2007).

Nhulun is of high cultural significance to Yolngu people, who still carry out a ceremony at Nhulun. The last ceremony took place on 1 May 2007 and was a commemorative re-enactment of the Galtha Bunggul held in 1969 (see image in p. 32). The re-enactment was timed to coincide with the opening of the interpretive display at Nhulun, which describes its importance to Australian history and culture (see image in p. 33). The re-enactment brought together Yolngu as well as non-indigenous people including government officials and schoolchildren to celebrate Yolngu culture and the recognition of land rights. However, despite this legal recog-

nition of Yolngu land rights, the Yolngu people continue to fight for the willing and cooperative recognition of these rights by non-indigenous people. This is reflected in the Dhimurru permit system and in the restoration activities Dhimurru has had to carry out as a result of the undesirable impact of visitors.

The Sacred Paintings of Muruwirri and Dhambaliya (Lonely Rock and Bremmer Channel)

The Dhambaliya Channel and Muruwirri are both good examples of sacred sites in the marine environment commonly called the sea country by the Yolngu, who also refer to themselves as 'Saltwater People' (National Oceans Office 2004). Djawa Yunupingu, the director of Dhimurru explains the Yolngu connection to the sea country when talking about the sea country management plan Dhimurru has been working towards:

"For Yolngu, sea country is very important culturally. When we sit, when we think, when we sing and when we dream, we have visions about sea country. Yolngu sing about the winds coming in from the ocean. The sacred sites from the Dreaming stories are there, too. We sing some animals from the sea, which are sacred to us, passed down from one generation to the next. Yolngu have sacred sites in sea country because stories are tied up with that land underneath it. That's why we paint and we explain those drawings and paintings. It is not a painting; it is a map, a map of the Dreaming and sea creatures and sacred sites. There are many stories behind it. Dhawu,

or stories, are very important to Yolngu". (Yunupingu and Muller 2007).

The paintings of Muruwirri shown in this chapter illustrate how the site is interconnected with the broader seascape commonly known as the Dhambaliya (Bremmer) Channel.

Muruwirri is a single rock protruding out of the sea in the Dhambaliya Channel. The Channel is sacred to the Riratjingu and Djambarrpuyngu clans, and in an area influenced by the *Djambawal*, the Thunderman and *Daymirri*, the ancestral whale. This place, song and significance extends to knowledge about features and landmarks that are at the bottom of the ocean floor but were dry land some 10,000 years ago (Buku-larrngay Mulka Centre 1999). This sea country is also important culturally, because the stories relate to heritage dating back to the Dreamtime and the testimony of famous turtle hunters. Turtle hunting is still regarded as a very important part of Yolngu culture. Although most of the pressure on turtle populations are due to the activities of *Balanda* (non-Aboriginal people), sacred places and cultural heritage can help conservation practices to generate Yolngu acceptance of potential regulations such as hunting limits which render the harvest sustainable.

The two paintings (images in p. 35) tell different stories, but the stories relate to the same place: Dhambaliya Channel and Muruwirri. The Painting by Mawalan Il Marika shows Muruwirri at the bottom with the white of the bird droppings on its top. The two king browns also refer to the sacred digging sticks called *Mawalan*

that point to a well of freshwater that springs from the ocean floor and is surrounded by patterns depicting the sacred currents of the sea. All these features exist in the Dhambaliya Channel. As they are painted through sacred design, they refer to stories that contain a rich source of information about the ecosystem. The painting by Mawalan Marika (Mawalan II Marika's grandfather) was designed to reveal some of these stories to two anthropologists (Ronald and Catherine Berndt) in the late 1940s. According to Mawalan II Marika, the detailed information depicted in the painting (Muruwirri being the yellow circle surrounded by an-

imals in the bottom left corner) by his grandfather is also present in his own painting, and those who are initiated in the knowledge can see it. According to Mawalan II Marika, "It is the easiest way to explain what we know about what is in the sea and what is in the land". Mawalan II Marika also comments on the *Balanda* map (meaning geographical maps): "It's really hard, I look at it and I can't even find it [the place and the story]. These maps don't match".

Yolngu artwork has many levels of meaning that are revealed to people in accordance with their status, gender and level of



Painting of sea country. Gunda Muruwirri



Painting of sea country. Dhambaliya myth map

initiation. Their meaning ranges along a continuum from 'inside' or secret (often sacred) to 'outside' or public knowledge (Hutcherson 1995). The explanations along this continuum are also referred to as 'open' or 'closed' stories. There is a growing awareness of the importance of saltwater paintings since the 80 bark paintings painted by Yolngu toured Australian museums in the course of gaining recognition for indigenous sea rights in 1997. The cultural information contained in such paintings is of paramount importance in the understanding of ecosystems, and even more important for successful conservation practices. Another key to understanding the importance of the Yolngu perception of nature to conservation is Yolngu's intimate spiritual relations with the sea country and the species in it. Throughout North-eastern Arnhem Land and the Gulf of Carpentaria, anthropologists have documented what is called 'calling up' or 'dreaming up' marine resources, or 'talking to country', which related to applying that spiritual relationship to land, the sea and the species in it (Chaloupka 1993, Cordell 1995, Memmot 2004). Yolngu people assert this relationship in their sea country management plan thus:

"We call up the names we have for important places in our sea country for different reasons and purposes – some are deep and secret" (Dhimurru 2006a).

Pressures and impacts

Yolngu people have a cultural responsibility to manage the land in accordance with spiritual obligations owed to their

ancestors. This way of managing the land has sustained Aboriginal peoples' presence on the land for what could be as long as 50,000 years (Chaloupka 1993, Memmot 2004, Yunupingu 2007). Although some Aboriginal practices of land management such as fire management may seem detrimental to the unaccustomed eye, they are in fact highly complex practices that are widely credited as being successful in managing, sustaining and enhancing ecosystem biodiversity. The continuity of caring for the country handed over from one generation to the next is also part of a process called 'cultural transmission'. One feature of attention with fire-management is that the healthy ecosystem that results from it is directly related to cultural integrity. For example, if Aboriginal people do not have their traditional cultural fire-management in place, the country receives less attention, the intervals between fires become too long, and fire events are inevitable too hot and prolonged, thereby having a negative impact on biodiversity and the area's carbon sequestration capacity (Muller 2007). Maintaining traditional practices thus depends on keeping culture strong and central to the management of Dhimurru Indigenous Protected Area.

The Yolngu people have had to adapt to the permanent residence of non-indigenous Australians – referred to collectively as *Balanda* by the Yolngu people – since the mid 1930s. However, it was the impact of *Balanda* living at Nhulunbuy since the 1960s which prompted Traditional Owners to establish Dhimurru to better control and manage the in-

creasing threat posed to the land. To halt unlawful access to land and potential damage to sacred sites, Dhimurru manages an access permit system that is at the forefront of the movement for getting their rights recognised. Dhimurru's permit system is an attempt at regulating visitor experience and impact within areas allocated for this purpose. The permit provides access to areas appointed by Traditional Owners as recreational areas. Apart from regulating the impact of, for instance, four-wheel drive access to beaches or camping and fishing, these recreational areas have been selected on the basis of Yolngu concern for visitor safety as much as safeguarding the sacred sites outside their perimeters.

Not surprisingly, most of the pressures on the natural (and often, indirectly, cultural) values of the IPA originate elsewhere. Of course, some of the factors which impact on the environment are beyond Dhimurru's scope of management. Some of these pressures are of international significance and caused by global processes such as climate change (e.g. greenhouse gas emissions), overfishing (e.g. bycatch and habitat destruction) and marine debris (e.g. 'ghost nets') washing up on stretches of coastline within the Dhimurru IPA. Dhimurru aims to address the forces behind those pressures through its cooperation with other institutions such as the Carpentaria Ghost Nets Programme, the Worldwide Fund for Nature (WWF) and the Australian Quarantine Inspection Services (AQIS) and Customs. An example of such collaboration being put to good

use is in the drive to address the decline in sea turtle and dugong populations (both IUCN Red-Listed species) due to boat strikes, overfishing, ghost net entrapment and habitat destruction outside the Dhimurru IPA on a national and international level. Other activities on the part of the residents of and visitors to Nhulunbuy —such as increasing numbers of tourists, the behaviour of recreational and commercial fishermen and the activities of the Rio Tinto-Alcan mining company— impact directly on Dhimurru.

Conservation perspectives and sustainability

As cultural and spiritual values are increasingly integrated into new conservation management approaches, they become an integral part of the benefits nature provides to society. These benefits (which include hunting, fishing and recreation) are termed 'ecosystem services' and contribute to the socio-economic development of Dhimurru IPA and the well-being of the Yolngu and *Balanda* who enjoy the cultural and natural richness of the area. A promising opportunity to integrate cultural and spiritual values into management approaches would be to establish historic baselines, which document species density over time based on cultural memory, song and art as well as other sources of cultural information. As relatively little scientific information exists on species abundance and behaviour, information of this sort derived from a cultural basis may be regarded as crucial to the defining of management objectives.

From traditional culture to modern science

Dhimurru manages two ends of the spectrum from traditional culture to modern science. This entails that what to map and what not to map should be based on a cultural basis. From a scientific perspective, it may be argued that maps are commonplace and well-developed for the terrestrial areas of the Dhimurru IPA, but that no accurate maps exist for its marine areas. From a cultural perspective, however, we have seen that this assumption is not entirely correct as detailed maps do exist (see images in p. 35). When negotiating the means by which mapping exercises are to be conducted, the assessment of a comprehensive system for storing these different information types will have to be considered. It has been suggested that a GIS database be developed with layers for each information source. These layers and the information sources contained in them could then be password-protected. It would thus be possible to develop points on a map linked to a video with password protection. In such cases, there is a need for a committee to decide on what is acceptable and what is not in terms of mapping and data storage. This would also win cultural approval for the process and legitimacy for its tools and *modus operandi*.

Dhimurru is uniquely placed to integrate management objectives into a cultural perspective. Coordinating the mapping exercise thus includes forming synergies between the interests of the parties involved and ensuring this is done in a manner respectful to cultural and spirit-

ual values. The intended cooperation goes beyond science working with cultural conservation projects: it is an opportunity to include and unite the qualities of Yolngu institutions such as the Buku-larrngay Mulka Centre, the Northern Land Council and Dhimurru Land Management Corporation itself. The contribution of spiritual values to the conservation efforts that could be supported through the mapping process could also provide a vehicle for developing potential means of safeguarding the spiritual values of those sites through their inclusion in patrolling programs, data storage systems and cultural databases kept at the Buku-larrngay Mulka Centre.

Mapping Dhambaliya

Synergies between the conservation of natural heritage and the protection of spiritual and cultural values are being developed through the mapping exercise. Both Yolngu traditional knowledge systems and their perceptions of nature are of critical importance for conservation management and planning. Muruwirri is an excellent example of this because the site including the Dhambaliya Channel has been earmarked for future conservation work. Dhimurru and partners such as the Aboriginal Areas Protection Authority (AAPA) and Natural Resources Environment and the Arts (NRETA) are planning a mapping exercise to better understand the cultural and natural heritage in the area. This mapping exercise is part of the programme to work on the sea country plan, and combines and builds on existing management pro-



Establishing plots for coral reef monitoring

grammes at Dhimurru such as turtle recovery and satellite tracking, marine debris surveys, participation in the Carpentaria Ghost Nets Programme, ethno-botanical survey of Melville Bay, coral monitoring, informal surveillance and the provision of expert advice (Yunupingu & Muller 2007). As efforts turn towards mapping the seabed, due care has to be taken to ensure that sacred sites and other cultural values are respected (see image in p. 39).

One of the ways of adapting to cultural conditions is to test equipment and approaches in less culturally sensitive areas first, showing people the proposed techniques so they can see if they are acceptable or not (see image in p. 35). As mapping also involves the consent and cooperation of the 20 clans represented by Dhimurru, reaching consensus on the work may not be an issue, though bureaucratic issues such as signing an agreement between all the organisations involved may prove virtually impossible for practical reasons. In modern

times, companies and government departments need documents to *sign off the job*, and establishing a Memorandum of Understanding (MoU) signed by facilitators and key staff rather than the Traditional Owners of all 20 clans usually serves as a solution. In addition, Dhimurru has developed a scientific protocol outlining the responsibilities of the researchers and partner organisations in terms of sharing the benefits of their research and addressing issues of Intellectual Property Rights (IPR). The agreement also enforces cultural protocols and can be seen as induction training for *Balanda* to learn about proper behaviour in working and communicating with Yolngu culture.

Talking about sacred sites, Nhullun

Through experience, Yolngu are politically aware of the importance of fostering effective ways of achieving reconciliation and cultural understanding. The Dhimurru homelands are the birthplace of Aus-

tralia's most famous Aboriginal music band: Yothu Yindi. At the height of its popularity, the band was instrumental in bringing issues such as recognition for culture and land rights to the forefront of mainstream Australian society. The band produced songs in Yolngu and English with titles like "Treaty", "Tribal Voice" and "Mainstream". The band has an international reputation, having toured extensively abroad, establishing relationships with other indigenous people's organisations around the world and forming the Yothu Yindi Foundation. Another example of mainstream musical exposure for the Dhimurru community was the recent co-operation with popular Australian folk rock artist, Xavier Rudd, which brought the re-enactment of the Galtha Bunggul and the importance of Nhulun as a sacred site to the attention of the Australian people. Xavier Rudd visited Northeast Arnhem Land and recorded a song called "Land Rights" with outstanding Yolngu artists and musicians which was included on his 2007 album *White Moth*. The song, which was inspired by the history and cultural significance of Nhulun, has once again carried the message of Yolngu people to the broader Australian public in a very effective and engaging way.

Culturally, Nhulun is an interesting example of the ongoing need to engage in public outreach and cross-cultural education, as the interpretive signage is regularly vandalised. This need is felt and recognised as a priority by each generation of Yolngu people, and expressed thus by Dhimurru's director, Djawa Yunupingu:

"Here in Northeast Arnhem Land we have a very strong culture. We feel the

pain of the land as it was felt through the eyes of the elders and we feel strongly again because the land is important to us; we feel the land, we sing the land when we care for the land and respect the land" (Dhimurru 2007).

From a management perspective, Nhulun demands continuous attention. Therefore, Dhimurru is considering taking measures against the destruction of the signage. The management options under consideration range from replacing the signage with more sturdy and damage-resistant signage to installing a permanent digital surveillance camera. Another option would be to make effective use of policy measures – for example, by penalising trespassers with the \$AUS 1000 fine foreseen by the Sacred Sites Act. Less rigorous options might include limiting access by excluding vehicles from the top of Nhulun. This could be combined with increased surveillance and patrols which would enable offenders to be reported to the police.

Conclusions and recommendations

Dhimurru has acquired extensive experience of managing sacred natural sites from a Yolngu and Western perspective. As Dhimurru's management is guided by perspectives central to Yolngu culture, spiritual and cultural values are always of primary concern to natural values. A number of universal lessons can be extracted from this broad experience which could be of use to indigenous peoples, managers and policy makers dealing with sacred sites:

Enabling equitable conservation practices:

1. *Empowerment.* Empower custodians and responsible community members to take appropriate care of their sacred sites. Ensure local custodians are assisted and their concerns addressed.
2. *Preserve culture as a whole.* Sacred sites are part of a rich cultural tradition which intertwines the land and the sea. They can be used to enforce traditional responsibilities in taking care of these areas.
3. *Living culture.* Cultural concepts such as law, song, art and ceremony should be treated as part of a living culture. Any of these aspects relating to sacred sites are usually part of a dynamic system, which is governed and practiced by Yolngu people and includes taking care of sacred sites.

Information management:

4. *Sacred sites and secrecy.* Sacred sites can be protected and registered, but they may also be kept secret from other parties for cultural reasons. Some of the different knowledge sets attached to them may need to be accessible to certain groups only.
5. *Access.* Access to sacred sites may be regulated based on zoning and permit schemes which can operate concurrently and in synergy with one another. Zoning schemes, in particular, may be a good way of conserving cultural and natural values.
6. *Sacred site information systems.* Once included in information systems, vari-

ous digital media and references to physical media can be stored in a (GIS) database. Information can be labelled and password-protected to regulate access and catalogue cultural significance.

7. *Intellectual Property.* Cultural protocols and intellectual property rights should be taken into account with regard to sacred sites and the cultural and spiritual values related to them. This can be important for visiting scientists, commercial operators, companies and other outside parties.

Communicating interests:

8. *Appropriate media and communications.* Consider media and other means of communication that are culturally acceptable and functional. The use of still images and film can be a very effective aid in protecting sacred sites. Such media can also be linked to existing information systems.
9. *Perceptions of nature.* Recognising different perceptions of nature is the key to understanding the importance placed on prioritising conservation options. This perception typically concerns the intimate Yolngu spiritual relations with the sea country and the species it contains.
10. *Aspirations and rights.* Communicate aspirations and rights to other organisations and institutions. For example, press decision makers (and governments, in particular) to recognise and implement the United Nations Declaration of the Rights of Indigenous Peoples, and share practi-

cal management experiences with other conservation organisations.

11. Reconciliation. Promote reconciliation and cultural understanding through the interpretation of Yolngu cultural beliefs and values for visitors. This may be of particular use in establishing good working relationships with other parties using indigenous land and sea areas.

The Yolngu people of Northeast Arnhem Land have chosen to share their experiences in the management of sacred sites and cultural and spiritual values, because they believe their extensive experience in managing sacred sites may be of value to other peoples, and that other people's experiences may be valuable to them. They recognise that the sharing of such expertise is dependent on a willingness and an ability to communicate openly and to respect different worldviews. Naturally, highlighting cultural differences goes hand in hand with respecting and understanding different perceptions. If

sufficient conceptual space is left for a mutual understanding of the importance of taking care of sacred places to grow, we can look after the power on this land together.

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Land rights protest image, 1969



Glossary

Balanda: Non-Aboriginal people.

Dhawu: Creation stories from the dreamtime connecting people, place and spirit.

Dreamtime: A mythological Creation time (very real to Aboriginal people) in which ancestral beings created the landscape by singing it into being and gave everything in the world its meaning.

Ghost nets: Redundant fishing nets cut loose from fishing vessels and left in the open sea to trap and kill marine life until they wash ashore.

Manikay: Song connecting people, place and spirit. Manikay, like roads, are known to form a network across the Australian landscape and are also called songlines. Amongst other things, they contain information needed to navigate through the land.

Miny'tji: Sacred art and painting or sacred design connecting people, place and spirit.

Ngapaki: see Balanda.

Rom: Traditional law or protocol directing culturally correct behaviour.

Sacred site: The Northern Territory Aboriginal Sacred Sites Act (2000, formerly 1989) defines a sacred site as a site that is sacred to Aboriginals or is otherwise of significance according to Aboriginal tradition, and includes any land that is declared to be sacred to Aboriginals or of significance according to Aboriginal tradition under a Northern Territory law.

Traditional Owners (TOs): The Aboriginal Land Rights Act 1997 defines TO as local descent group of Aboriginals who: (a) have common spiritual affiliations to a site on the land, being affiliations that place the group under a primary spiritual responsibility for that site and for the land; and (b) are entitled by Aboriginal tradition to forage as of right over that land.

Wangar: Ancestral beings from the dreamtime which created the landscape — including the rocks, lakes, trees, sea and animals alive within it— and sang it into being.

Yolngu: Aboriginal people of Northeast Arnhem Land Australia.

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Sacred versus secular in the San Francisco Peaks

Arizona, USA

Jeneda Benally

Lawrence Hamilton

You must always be careful with something that is greater than you are.
Shoshone Native American Proverb

Look there! You see a mountain. We see the spirits of our ancestors.
Kuka Yalangi, Australian Aboriginal, 2002

Introduction

Since time immemorial, more than 22 Native American Nations have revered the Sacred San Francisco Peaks as a distinctively vital site that has consistently been accessed for specific religious purposes. This unique biome is an ecological island that provides refuge to a multitude of different life-forms, some of which are rarely found elsewhere in the surrounding dry region and, in some cases, the world. Rising from the semi-arid Colorado High Plateau in Northern

Arizona (US), the San Francisco Peaks are a volcanic massif. Mount Humphreys, the highest peak, has an elevation of 3,851 metres and is the highest point in Arizona. Although the San Francisco Peaks are comprised of six peaks in all (four of which are the highest individual peaks in Arizona), the 22 tribes acknowledge the massif as a single living entity. Each tribe has a unique relationship with the San Francisco Peaks that leads to it bestowing a distinct tribal name on the mountains and a specific



Location of San Francisco Peaks

role in their tribal tradition. In the 1600s, Spanish colonists, disregarded the Native American place names and named the prominence after Saint Francis of Assisi, who many now consider the 'patron saint' of ecology.

Called Dooko'oo'sliid by the Navajo (Dine') Tribe, the San Francisco Peaks are recognized as a female life-form by the Native American tribes that regard her as holy, and by the 22 tribes for whom she is a source of medicinal and ceremonial plants and minerals as well as a place of spiritual nourishment. Called the 'Peaks' locally, the complex is an icon to most residents and visitors; a dominant landscape feature that greets them daily. The Peaks, which are only 16 kilometres to the Northwest of the small city of Flagstaff, are managed by the United States Forest Service. Although the tribes have always been stewards of the land, their role is now constrained to being consulted in decisions pertaining to land use; this tribal consultation rarely, if ever, provides protection for the sanctity of this Holy Site.

The green forested slopes and snowy summits of Dook'oo'sliid stand in marked contrast to the ochre-coloured, sparsely-vegetated landscape around them. Due to the physical features and positioning of the mountains, the Peaks capture rain and snow and thus help nourish the dry lands around them (including the city of Flagstaff) with streams, springs and groundwater aquifers. This green oasis provides a variety of habitats not found elsewhere in the vicinity. In 1869, a biologist named C. Hart Merriam studied the San Francisco Peaks and discovered six of the seven life-zones used to classify climate zones (Merriam 1890). Dooko'oo' sliid is an extremely important land — and spirit-scape that has helped to define people's identity and history.

Natural values

Most of The Peaks is public federal land under the jurisdiction of the United States Forest Service as The Peaks District of the Coconino National Forest (728,400 ha). It is an IUCN Category VI Managed



Coconino National Forest: Peaks District, showing San Francisco Peaks

Resource Protected Area. Under the Forest Service's multiple-use policy, the area has over the years hosted timber harvesting, some grazing, pumice mining, a ski development and general public outdoor recreation activities including hiking, riding, hunting, camping, cross-country skiing and picnicking. There is a large designated Kachina Wilderness Zone (7,670 ha). On the western flank of the Holy Mountains, the Nature Conservancy owns and manages the Hart Prairie Preserve (100 ha), a nature-based facility for educational programs.

This mountain complex is a haven of biodiversity, at the regional level at least, thanks to its higher precipitation, several altitudinal vegetation zones, directionally-varied orientation and myriad microhabitats. Major communities include the Rocky Mountain upper montane conifer forest, intermontane grassland, alpine tundra and important seasonal wetlands. The bristlecone pine (*Pinus aristata*), which is famous for its longevity, occurs on the upper slopes, while the endan-

gered San Francisco Peaks groundsel (*Senecio franciscanus*), a remarkable plant of the Asteraceae family endemic to the San Francisco Peaks (US Fish and Wildlife Service 1983), occurs above the tree line. The most common tree is the ponderosa pine (*Pinus ponderosa*), five varieties of which grow in the Peaks. This forest, which stretches from the Peaks to the White Mountains, is the largest block of the widespread ponderosa pine forest of the North American continent (Graham and Sisk 2002). From these various natural communities, a wide variety of medicinal and ceremonial plants, minerals and materials (including feathers) are harvested by tribal spiritual leaders.

The golden-leaved aspens (*Populus tremuloides*), which stand in a glorious contrast to the adjacent dark green conifers in autumn, provide additional scenic splendour. The peaks are also home to animals seldom found on the surrounding plateau, including the black bear, mountain lion, deer, peregrine falcon, bald eagle and birds endemic to forest



View of the Peaks from the Flagstaff urban area

and alpine habitat. The endangered Mexican Spotted Owl (*Strix occidentalis lucida*) also finds sanctuary in the San Francisco Peaks (Defenders of Wildlife web site, undated).

The Peaks' most valuable natural product, in monetary as well as non-monetary terms, is its high quality water. It is the main water source for the city of Flagstaff (population 65,338), and recharges groundwater for the dispersed residents, ranchers and farmers who use the Coconino aquifer. Further, the presence of snow on their upper slopes, though increasingly unreliable due to global warming, has given rise to a skiing enterprise: the Arizona Snowbowl.

The opportunity for forest hiking with spectacular views has led to the creation of a substantial network of trails, some with an elevation gain of over 1,000m. In the summer, the Scenic Skyride (a Snowbowl lift) carries people to a 3,500m high view, above the tree line.

The presence of volcanic pumice led to small-scale mining, which expanded in

the 1990s and resulted in a major confrontation with those who regarded the mines as wounds on the sacred body of the Earth. Environmentalists, the Tribes and the Forest Service worked together and, joining forces with Former Secretary of the Interior Bruce Babbitt, succeeded in having the pumice mine shut down.

Spiritual and cultural values

Twenty-two Tribal Nations, each with distinct linguistic, historic and lifestyle characteristics, have found commonality in the holiness of the Sacred San Francisco Peaks. Some tribes have specific shrines on the mountain while others recognize that the entire mountain is integral to continue their cultural and spiritual survival. The sanctity of the mountain affects the spiritual, emotional, mental and physical aspect of these traditional people. For some tribes, every ceremony and each of their prayers are directly tied to this unique mountain icon. Both the fate of the individual tribal members

and the survival of these ancient living cultures are bound to the purity of their holy mountainous Mecca.

Medicinal plants are also gathered on this sacred mountain, and traditional medicine has remedies for ailments for which modern medicine has no known cure including cancer, arthritis, AIDS and heart disease. Given that the San Francisco Peaks is an oasis in the high desert, there are many plants that are only to be found on the mountain. If the ski area is allowed (with the concurrence of the Forest Service) to introduce 681 million litres of treated sewage effluent per season to this mountain ecosystem, Traditional Medicine practitioners insist that the ceremonial materials they have gathered for generations will be physically and spiritually contaminated and that, consequently, they will no longer be able to treat their patients effectively. The Forest Service cannot guarantee that plants outside the ski resort's Special Use Permit area would not be contaminated with wastewater. The sanctity of the Sacred San Francisco Peaks is of the utmost importance to the continuation of these ancient healing practices and living faiths.

The San Francisco Peaks is the home to deities: The Hopi Tribe believe the Kachinas live here and journey to bring rains to the distant dry mesas for the cultivatable season; for the Apache Tribes, the mountain is home to the Mountain Spirits; for the Navajo, it is home to the Holy People. Consequently, tribal people make offerings, say prayers and perform rituals and ceremonies to ensure balance in the tribes' relationship with these natural deities and with each other.

For the many tribes that perceive the San Francisco Peaks as Holy Mountains, there is a duty and responsibility not only to protect the land, but also to preserve their traditional knowledge; traditional knowledge that is a privilege. Tribes revere the Sacred San Francisco Peaks for some of the following reasons:

- Dine' (Navajo): for Dooko'oo'sliid, the Western Sacred Mountain that controls the adulthood of people's life, and for being the home of the Holy People;
- Acoma: for Tsii Bina, the Sacred Western point that represents completeness, health and well being;
- Hopi: for Nuvatukyaovi, home to the Kachinas, rain makers;
- Havasupai: for Wi' i Hanginbajah as a place of purification and the emergence point during the water world, when the world became unsafe and flooded with water;
- Hualapai: for Wi'hanbacha, the historical point at which the creation story begins for this world, being the 4th world. Offerings are carried to this site when tribal members need help and healing;
- San Carlos Apache, White Mountain Apache, and Yavapai-Apache: Dsil Ligai Sian Nahokos Biyaayu, a portal into the spirit world and as the home of the Mountain Spirits and the Origin of Changing Woman;
- Zuni: as Sunha kyabachu yallane, which is significant to the on-going traditions and practices of the Zuni people, and for its ties to ancestral Zuni from their time of emergence.

These beliefs are core elements of the oral cultural traditions of the tribes.

The traditional medicine men and women are responsible for their tribes' cultural and spiritual heritage. Each tribal nation has its own historians and medicine people who devote their lives to their traditional art. When one learns a particular ceremony, one must learn all the traditional stories that are interconnected with it, and the spiritual leaders often begin learning at an early age accompanying a family member with the knowledge. Today, because of mandatory schooling in the public education system and its materialistic emphasis, there are fewer young people learning the traditional ways.

Tribes have continuously appealed to the city of Flagstaff, the Forest Service and the Ski Resort to stop desecrating their Sacred Mountain. The 22 tribes are part of a coalition to protect the Sacred San Francisco Peaks, which has received the support of a number of 'local' people in the Flagstaff area and the State of Arizona, including business owners, tourists and the Sierra Club (a nation-wide environmental NGO). Several faculties of Northern Arizona University have also helped by integrating the controversy into their classes. However, the Chamber of Commerce and other organizations within the tourist industry have favoured the further development and exploitation of the region, despite the Forest Service issuing an Environmental Impact Statement, which makes it clear that the ski resort is not the most significant driver of the Flagstaff economy. Unfortunately, most visitors and tourists are unaware of the cultural and spiritual significance of the San Francisco Peaks to

the 22 tribes, and there is no central facility or information centre to raise their awareness on this subject. Most people who are aware of the controversy have learned about the area's natural, cultural and spiritual heritage from the media outreach and events organized by the Save the Peaks Coalition. Informative articles have also been published in international journals including *Mountain Research and Development* (Hamilton 2006) and *Scottish Mountaineer* (Hamilton 2007), while the controversy has been covered by leading US newspapers. However, although the Save the Peaks Coalition receives letters of support from all over the world, the Forest Service has not altered its ruling.

Pressures and impacts

Small-scale mining activity was formerly permitted by the Forest Service for the extraction of pumice and cinders, but the demand for stone-washed (faded) blue jeans in the mid-1990s greatly increased the profitability of, and demand for, pumice. Until 1998, the White Vulcan Mine (Tufflite Inc.) managed both to ignore the protests of the local Navajo, Hopi, Hualapai, Zuni and White Mountain Apache communities, but also to expand the extent of its operations from 2 to 36 ha. However, when Tufflite Inc. filed for a further 12 ha under the obsolete 1872 Mining Law, its actions did not go unchallenged: rather, it galvanized 13 tribes and the Sierra Club to work together to bring the mining company's expansion to a halt through a series of well-conducted cultural events and protest rallies. At the same time, the Forest Service

KACHINA PEAKS WILDERNESS



Map of the Kachina Wilderness Zone showing the location of Snowbowl

requested the Secretary of the Interior to withdraw 29,500 ha of the national forest from mining claims. In 2000, the Secretary, calling the mining “a sacrilege”, signed an agreement at the site to close down the mine within 6 months and for restoration work to begin. Although the tribal coalition proposed at this time that

the Peaks be declared a Traditional Cultural Property and be listed on the National Register of Historic Places, the Forest Service has still to designate it as such. The success of this joint effort led to the coordinated support of 13 tribes against the current threat posed by the proposed Snowbowl development.

The history of logging, grazing and mining in Northern Arizona goes back to the arrival of the first Europeans in the area. In 1898, the Forest Reserve now known as the Coconino National Forest was set up to control forest exploitation activities in the area. Timber harvesting centres on the ponderosa pine and is a major economic activity which impacts on the site (though not in the Kachina Wilderness Area). Over the years, timber harvesting has become less significant as recreational demands have increased. Prescribed burning to reduce fuel loads is now a common practice in National Forest management. Hunting occurs, mainly during the winter. Although mountain bikes and all-terrain vehicles are prohibited from the Kachina Wilderness Zone, the forest (logging) routes are available to them elsewhere.

That the Forest Service requires tribal medicinal gatherers to file a permit and, in some cases, to pay a fee for collecting plants, minerals and any other material from the Forest Service land / Sacred San Francisco Peaks is a source of cultural stress. Failure to comply with the law can result in a fine of up to \$5,000 fine and / or a 6-month jail sentence. Although, to the best of our knowledge, no one has ever been prosecuted for failing to comply with this regulation in this specific area, it serves as a deterrent and places a burden on traditional practitioners' ability to obtain the ceremonial herbs they need.

A serious threat to the natural and spiritual / cultural values of the area is attributed to the ski resort on the South-western flank, approximately 16 kilometres from the small city of Flagstaff. A small, rustic ski development was permitted by the

Forest Service c.1938 without consulting the tribes, who have always opposed ski development on the mountain. In 1983, despite protests made by several Native American tribes, especially the Hopi and the Navajo, permission was granted to expand the ski resort by including more pistes, four ski lifts, a lodge and an expansion to the parking facility. The Courts ruled such protests out on the grounds that a development of this kind did not impede the religious rights guaranteed under the 1978 American Indian Religious Freedom Act; however, it did in fact impact adversely on Native American religious practices relating to the Sacred Mountain. The ruling claimed the tribes could still access their spiritual site from other places on the Peaks. However, for the tribes, access was a non-issue; what they were protesting in favour of was protecting the physical integrity and virtue of the wholeness of the natural state of the Peaks —something the courts had failed to fully recognize. In 1998, the Navajo Nation Council passed a resolution calling for the immediate dismantling of the ski area in order to restore the Peaks to their natural state.

Late in 2002, however, another threat manifested itself to the sanctity of the Peaks: a further proposed expansion of the Snowbowl, which had been suffering from declining snow cover and hence profits. With the support of the Forest Service, the Snowbowl ski resort proposed a development plan that would significantly alter the southern slope, where the ski resort is operational at present, by expanding the parking facilities and adding new ski lifts. The Snow-

More than 13 Indigenous Nations hold the Peaks Holy

Diné (Navajo)
Hopi
Yuki
Yavapai
Hualapai
Havasupai
Yavapai-Apache
Yavapai-Prescott
Lino Ai Apache
White Mountain Apache
San Carlos Apache
San Juan Southern Pueblo
Fort McDowell Mohave-Apache
Apache



View of The Peaks with a list of affected tribes on a map of Arizona

bowl developers also signed a contract with the City of Flagstaff by which they would use the city's wastewater to make artificial snow (to supplement the limited natural snowfall) and construct forthwith an immense open-air wastewater tank with a capacity just short of 38 million litres. Signs would then be posted advising people not to eat the snow, and snowmaking guns would be brought into service which would —under normal conditions —be operational 24 hours a day. A single snowmaking gun can be heard over a radius in excess of 1.6 kilometres; the ski resort has not disclosed how many snowmaking guns they intend to use. Despite considerable public outrage, the City Council and Mayor of Flagstaff have agreed to allow Snowbowl to use wastewater for snowmaking. It should be noted that the ski business in operation on the San Francisco Peaks has changed hands many times due to the unreliability of its profits.

Quite apart from the extension of the ski resort's built facilities, the use of waste-

water in a sacred area is, in itself, anathema to the Native Americans. For their part, the Hopi fear that if man makes snow at the home of the rain-making Kachinas —who are essential to the Hopi way of life— the deities will abandon their homes in the mountain, but also the Hopi people. The Navajo and Apache Bands have a deep understanding of their own traditional sciences and know that wastewater can never be fully cleaned. Water used in hospitals and mortuaries, as well as women's menstrual blood, will have severe effects on the health of the environment. For the Navajo, the health of Dooko'oo'sliid is mirrored directly in the health of the Navajo people. For its part, western science has found that water treatment cannot remove all the contaminants, which include chemicals, hormonal compounds and antibiotics. In an appeal to the United Nations, Navajo President Joe Shirley stated that *"the hearts of my people will again be broken, their health will inevitably suffer, and we will again witness the*



View of the Peaks from the Navajo Reservation

continued erosion of one of the oldest indigenous cultures in North America at the hands of the US Government”.

Thirteen tribes have re-united with the Save the Peaks Coalition, and have been joined by several environmental NGOs including the Sierra Club. In April 2005, despite two years of petitions and negotiations with the Coalition, the Forest Service made an announcement in favour of the development proposal. The Coalition secured the services of an attorney and lodged an appeal against the Forest Service in August 2005. In January 2006, a District Court judge rejected the appeal, indicating, it would seem, that the economic interests of the Arizona Snowbowl Resort, a single for-profit business, are more important than the beliefs of hundreds of thousands of Native Americans. This decision was appealed in turn in September 2006 before a Circuit Court of Appeals in San Francisco, which ruled in favour of the Coalition in March 2007. The ruling states that the US Constitution affirmatively mandates the

accommodation, and not merely the tolerance, of all religions, and declined to authorize the use of wastewater treatment facilities for snow-making purposes. The Forest Service and Arizona Snowbowl Ski Resort filed for a rehearing and their request was granted. On 11 December 2007, the case was reheard *en banc* by the 9th Circuit Court of Appeals of the United States of America. The *en banc* court consists of the chief judge and another ten randomly-selected judges.

The *en banc* reached a divided decision on 8 August 2008 with the majority overturning the decision of March 2007. The court based on their interpretation of the Religious Freedom Testoration Act, stated that the “diminishment of spiritual fulfillment — serious though it may be — is not a substantial burden on the free exercise of religion”. The Federal Administration and land management agencies understand, as do the Tribal Nations, that this precedent-setting ruling will affect policy wherever Native Americans have sites of special spiritual value on public land. The

Tribes, individuals and several grassroots organizations filed a petition on 5 January 2009 for the Supreme Court of the United States to hear their appeal. It is not clear whether the Supreme Court will decide to hear the case; until a decision is reached, however, the Snowbowl is legally barred from further development on the sacred San Francisco Peaks.

On June 8, 2009, the Supreme Court of the United States denied the petition to hear the appeal case of Navajo Nation *et al.* vs. United States Forest Service. The case was based on the Religious Freedom Restoration Act (RFRA). Since the Supreme Court refused to hear the case, the RFRA becomes virtually unavailable to protect sacred places on Federal lands in the United States. Although this case was denied, the Save the Peaks Coalition continues its work to protect the Holy San Francisco Peaks. It may take work in the US Congress to revise the RFRA to make more explicit the complete intent of what religious freedom entails i.e. that it involves much more than access to a site -it involves loss or impairment of sanctity values as well. See Addendum for latest development.

Conservation perspectives and sustainability

The natural resources of the Peaks are mandated for conservation and sustainability under the legislation governing the foundation of the National Forest System. The threat of mining claims on public land has been removed from this area by virtue of the decisive action of closing down the White Vulcan mine in 2000. Policy rul-

ings over the years under a 'multiple use' mandate have led to different interpretations of 'conservation', which have given rise to conflict. The Forest Service in general has been criticized by environmental groups for assigning priority to logging, and there have been some problems in recent years relating to the satisfactory natural regeneration of the forest. The use of better silviculture and use of controlled fire seems to have put the area under commercial harvesting onto a more sustainable path. The designation of the Kachina Wilderness Zone also bodes well for conservation, although it could be removed by an administrative ruling. Increasingly, the Coconino is being managed to give priority to recreational use. However, to protect fragile natural communities, off-trail hiking and camping above the tree line are prohibited, as is camping in the Inner Basin.

A physical enlargement of the Snowbowl into the forest is still a possibility, since the ski centre has received Forest Service approval for a 29-hectare expansion involving the felling of old-growth forest on the allotted leased land. If snowmaking is no longer a possibility under the court ruling, the whole enterprise would have to continue operating as it has done to date. For instance, during the winter of 2001-2002 it was only open for 4 days due to poor snowfall; conversely, the winter of 2008-2009 was one of its top ten years.

It is clear that the spiritual / cultural values of the Peaks are in need of greater protection. One measure already being advocated by the Coalition is the designation of the Peaks as a Traditional Cultural

Property. Some recognition of 'national significance' by the President or Congress might reduce the threat of harmful local administrative decisions.

There is even potential for international recognition if the Peaks District, or the entire Coconino, were to be designated a Biosphere Reserve. The core zone of such a Reserve could afford protection to the less disturbed high elevation area (including the Kachina Wilderness Zone) and to any lower-altitude specific sites of spiritual / cultural value. In the lowland peripheral zone, regular sustainable multiple use could continue, along with sustainable private land management. With a new and more environmentally-friendly administration in power in 2009, such a scenario seems more likely than previously.

Recommendations

As far as the Peaks are concerned, the decision- and policy-makers need to take the spiritual, cultural and natural values of the area into account along with its extractive and recreational activities. They must recognize the customary religious practices, healing powers, sacredness, and traditional history relating to such areas. In line with the above, a broad set of recommendations focuses on:

- The need for greater consultation with the original Native American owners and users of this land during the different phases of the planning and management process (strictly speaking, Native Americans do not regard themselves as 'owners' of Mother Earth);
- The importance of granting a decision-making role to Tribal Governments and Tribal Spiritual Leaders in issues relevant to the land management of special Tribal Sacred Sites;
- The benefits of co-managing areas of public land or public trust. A recognized, increasingly common and socially just arrangement for including local traditional users, this has proved to be the best method of avoiding conflict, and should thus be taken into consideration here, too;
- The designation of the area as a Traditional Cultural Property by the President or Congress, which would give it national significance;
- The inclusion of the Kachina Wilderness Zone in the National Wilderness Preservation System, which would remove the possibility of its being declassified locally;
- The investigation of the area's designation as an International Biosphere Reserve by a future federal administration;
- The need to increase public awareness of the San Francisco Peaks as a sacred site and its significant impact on the everyday lives of Native Americans and the continuation of their ancient ways of tribal life.
- The establishment of a Living Cultural Centre that would serve as a resource centre for educating visitors about the cultural and spiritual significance of the Sacred San Francisco Peaks.

Addendum

On September 21, 2009 the Save the Peaks Coalition and nine citizens filed suit against the U.S. Forest Service under the National Environmental Policy Act. This is based on inadequate consideration of the possibility of human ingestion of snow made from treated sewage effluent. The Forest Service is obligated to consider these types of potential impacts on the quality of the human environment.

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The National Park of the Casentine Forests

Italy

Gloria Pungetti

Franco Locatelli

Father Peter Hughes

Introduction

The National Park of the Casentine Forests, Mount Falterona and Campigna extends along the ridge of the Apennine dividing Tuscany and Romagna. It descends steeply into the valleys on the Romagna and eases gently into the Tuscan slopes in the Casentino area. It reaches the springs of the Arno River, and gradually slopes down into the broad valley of the Arno. The Park contains three sites of great interest and spiritual importance: the Sanctuary of La Verna, the Monastery of Camaldoli and the Hermitage of Camaldoli.

Natural values

The Casentine forests are part of the national park which includes the Casentine forests, Mount Falterona and Campigna. The park, which spreads over the provincial territory of Forlì and Cesena in Romagna and Arezzo and Florence in Tuscany, covers an area of roughly 36,000 ha on both sides of the Apennine. The body responsible for the protection of the park's natural heritage is the National Park Authority. From an environmental viewpoint, the park stands out as one of the most precious forested areas in Europe, being home to rich vegetation including

woods of pine (*Pinus* spp.), silver fir (*Abies alba*), beech (*Fagus sylvatica*) and mountain maple (*Acer spicatum*), as well as mixed woodland with an incredible variety of species.

Over 1,000 species of flora have been recorded to date in the National Park area (Cavagna and Cian 2003), with a particular concentration in the meadows, glades and crags of Mount Falterona.

The Park also abounds with fauna, with species including the Apennine wolf (*Canis lupus italicus*), wild boar (*Sus Scrofa*), roe deer (*Capreolus capreolus*), fallow deer (*Dama dama*), common deer (*Cervus elaphus*) and mountain sheep (*Ovis ammon*). The birdlife includes some 100 nesting species, some native to central Europe – the alpine tree-creeper (*Certhia familiaris*), bullfinch (*Pyrrhula pyrrhula*), ring ouzel (*Turdus torquatus*) – and others to the Mediterranean – the Sardinian warbler (*Sylvia melanocephala*), whitethroat (*Sylvia communis*) and black-headed bunting (*Emberiza melanocephala*). Birds of prey include the sparrow hawk (*Accipiter nisus*), goshawk (*Accipiter gentilis*), golden eagle (*Aquila chrysaetos*) and peregrine falcon (*Falco peregrinus*). Moreover, the Park is home to 13 amphibian and 12 reptile species and to a large number of insect types (ibid.).

As a tourist attraction, the Park provides recreational and outdoor sports opportunities including mountain biking, horse-riding and cross-country skiing along a network of paths which extend for roughly 600 kilometres.

Spiritual and cultural values

The artfully constructed stone bridges and ancient roads, which still enable visitors to reach towns and villages, are of great historical interest, as are the area's hermitage and monasteries, its Etruscan settlements and the Roman Way, which ran from Rome to Germany.

Country cottages, isolated or in clusters, ruined castles and small stone shrines also form part of the area's natural and cultural heritage.

The area's main sacred sites are the Benedictine Hermitage and Monastery of Camaldoli and the Franciscan Sanctuary of La Verna, whose religious communities – along with groups of pilgrims – form the area's spiritual social groups. The Park is also visited by nature-lovers, cyclists, horseback riders and cultural tourists.

The bodies responsible for the preservation of the area's cultural and spiritual values are the Hermitage and Monastery of Camaldoli, the Sanctuary of La Verna and the National Park Authority of the Casentine Forests, Mount Falterona and Campigna.

The first two bodies are primarily concerned with spiritual values and conduct workshops and seminars on relevant religious and spiritual topics, as well as providing personal individual retreats, in addition to hosting formal worship. Cultural values are primarily the preserve of the municipalities, particularly those of Santa Sofia and Poppi whose “Baroque and the Casentino” art exhibitions include works by local monks. The local population and visitors alike have always held both the monasteries’ spiritual values and the Park’s cultural values in high regard.

Pressures and impacts

There are innumerable ruins and abandoned villages in the designated Park area, which are largely a result of the domestic migration to urban centres that began during World War Two. The actual inhabitants of the National Park number 1,500 people at most.

Their activities relate to the religious orders, culture, nature and the forests and include pilgrimage, forest management, hiking and tourism. Tourism aside — a constantly growing industry with a growing impact on both nature and culture — there are no other major economic or industrial activities with an adverse environmental, cultural or other impact. Nonetheless, the monoculture-based forest management, which traditionally favours the silver fir, is not in sympathy with nature conservation as it serves to reduce biodiversity.

The Constitution of the Hermitage of Camaldoli (1080) sheds light on past land use in the area, since it highlights the date when land use regulations began. The Forestry Code of Camaldoli was passed in 1520 and remained in force until 1866, when the forest became state property and part of the national park administered by the State Forestry Body.

Conservation perspectives

The Hermitage of Camaldoli, which was founded in 1024 by Saint Romuald, is surrounded by white firs (Firgerio 1991), while La Verna, which became the Hermitage of Saint Francis in 1213, is surrounded by firs and beech trees (Catoloni *et al.*, 2003). Both the heritage and the forest have been venerated and respected for centuries by both the monastic and secular communities in the area, who continue to conserve its spiritual heritage; the task of conserving its natural and cultural heritage is now undertaken by the National Park Authority.

Past and present synergies between conserving the area’s natural heritage and protecting its spiritual and cultural values are evident in the monastic communities. The contribution of spiritual values to the conservation of the natural environ-

ment in the Casentine Forests – in the case of the orders of saints Romuald and Francis, in particular – is closely interwoven with the area's natural and religious history. Down the centuries, the spiritual values of these two monastic orders have played an important role in the management of the forests and they continue to contribute to the conservation of the natural environment today. Safeguarding these values is thus the key to preserving and managing the area; this could be achieved by a campaign to raise awareness of them coupled with a clear site management policy.

Although both orders have played a leading role in this effort for centuries, our era requires a new and more pro-active management strategy including strong partnerships and efficient collaborations, particularly between stakeholders – the National Park Authority, the local authorities and local communities – who should be invited and encouraged to participate in the management process.

Conclusions

The preservation of the natural, cultural and spiritual wealth of the area is linked to balanced socio-economic development which depends, in turn, on the local authorities, the local population and visitors. Although all three are aware of the area's natural, cultural and spiritual heritage, problems arise when open spaces are used as a public amenity – visitor parking, for instance – where better planning and management is required if conflicts between the needs of the spiritual communities and the tourists are to be minimised.

In order to overcome these problems, local communities should be involved in the planning and management process. There is also a need for campaigns to raise environmental and cultural awareness among local communities. Finally, the area's natural, cultural and spiritual heritage should be linked to – and embraced by – the local planning authorities for the sustainable development of the Casentine Forests.



Forest around Camaldoli Monastery

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الله أكبر

'Abd al-Salâm ibn Mashîsh and Jabal La'îlâm Site

Northern Morocco

Zakia Zouanat

Introduction

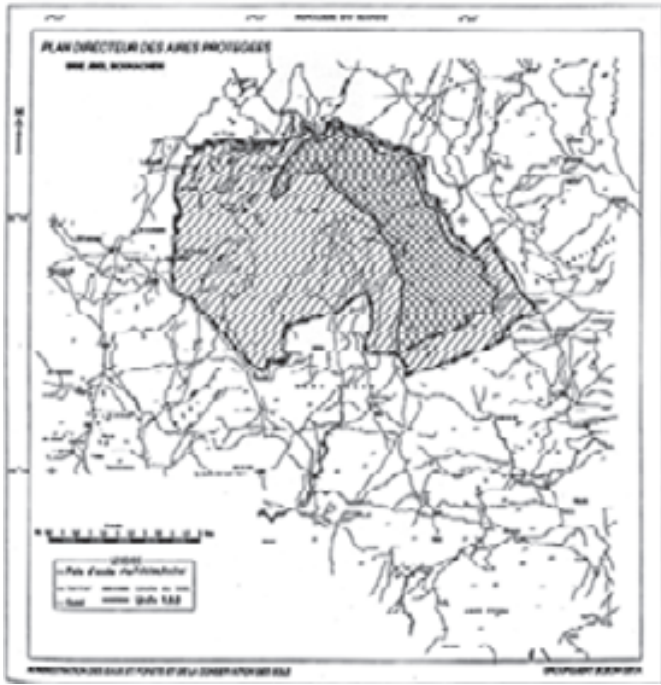
Jabal La'îlâm, the mount of the banner or signal, is a place of outstanding spiritual, cultural and natural importance in the heart of the Jabal Bouhachem massif in Morocco's Rif Mountains. The site is well-known in North Africa and elsewhere in the Sunni Muslim world because of its association with the life and death of Sîdî 'Abd al Salâm Ibn Mashîsh, the spiritual master of the founder of the Shâdhilî Sufi order.

There is no exact Islamic equivalent for Christian and Buddhist monastic communities, because the example of the life of its founder, the Prophet Muhammad, does not encourage it. The closest equivalent are the Sufi orders or brotherhoods, which usually consist of married people living in society.

This sacred site is exceptional for four reasons: firstly, it has been a significant living pilgrimage centre for five centuries; secondly, its custodians are the descendents of the holy man buried there, Ibn Mashîsh, who was himself descended from the Prophet Muhammad; thirdly, political and military resistance against invaders from the north has centred on this holy site; and lastly, respect for the simplicity of Ibn Mashîsh's life has kept human intervention in the holy site to a minimum, making it one of the important Islamic shrines that have remained close to nature.

Spiritual and cultural significance

Many of the dramatic natural features of the Mediterranean's mountains — special rocks,



Jabal La lâm site map

forests, monumental trees, springs, caves etc. — have been afforded sacred status since ancient times. This was the case with the Rif mountains in general and Jabal La lâm in particular. Written references to the spiritual values of the site go back to the 9th century. Ibn 'Arabî, the famous Sufi master who lived in the 12th and 13th centuries, notes in his biography of the Sufi Dhû-l-Nûn al-Misrî that al-Misrî encountered groups of saints in this region who lived near water sources and slept under oak trees, as many pilgrims do to this day. Over the last seven centuries, however, Jabal La lâm's significance has been related to one of Morocco's most famous saints: Mawlây 'Abd al-Salâm ibn Mashîsh, known as the patron or head of the *Jbala*,

which means 'the people of the mountain'. Ibn Mashîsh, who died in 1228, was the founder of the Shâdhilî Sufi order through his disciple and the inheritor of his 'spiritual secret', Abû-l-Hasan al-Shâdhilî, a member of the local Bani Zeroual tribe.¹

Today, the Shâdhilî order is spread throughout the Eastern and Western Muslim world. Flourishing initially in Tunisia and Egypt, it returned to its native land three centuries later via two important 16th-century saints: al-Jazûlî and Zarrûq.² Since then, pilgrims and people

1 Ibn Zâkûr, *'Abd al-Rahmân, al-istishfâ' min al-alam fâ ma'âthir Sâhib al-'Alam*, BH, 3585.

2 Ma'lamat al-Maghrib [Encyclopédie du Maroc]: entries on '*Al-Jazûlî*' and '*Zarrûq*'.

of different backgrounds, from kings and religious authorities ('*ulama*) to simple shepherds, have visited the site and the tomb of Ibn Mashîsh.

Two main pilgrimages have been instituted through the centuries: the *Naskha*, a religious feast which falls on the 15th day of the Islamic month of *Sha'bân*, and a *Hajj* as important as the sacred pilgrimage to Mecca. The pilgrimage to the tomb of Ibn Mashîsh has been called 'the pilgrimage of the poor' (*hajj al fu-qarâ*'), meaning that those without the means to make the pilgrimage to the holy city of Mecca go there instead.³ In addition to the main pilgrimages, however, there is a year-round influx of pilgrims bringing alms to the custodians, the descendants of the saint who moved their village from the foot of the mountain to the area of the shrine at its top about a century ago, when the path to the shrine was built.

Ibn Mashîsh left a unique piece of writing behind: a wonderful prayer of love and praise for his ancestor the Prophet Muhammad —the *Mashîshiyya*. This prayer has been commented on over 70 times by Sufi masters in view of its essential content: the doctrine of Muhammadan Reality.⁴ The sacred components of the site are the sanctuary, the cavern (which was the saint's retreat during his years on the mountain), the mosque of angels, the miraculous rocks, the sacred places —witnesses of the saint's martyrdom,

the sources of holy water and a village— al-Sukkân, whose name means the 'heirs of the holy man'.⁵

The shrine is an old oak tree, its walls are the magnificent mountain landscape, its vault the sky, the carpet pieces of cork bark from the nearby cork forest. In addition to these holy places, all of them near the top of the mountain, Jabal La'lâm boasts numerous other holy places including the sanctuary —Sîdî Mashîsh— of Ibn Mashîsh's father, and those of his ancestors. It also has some important subsidiary villages and towns, including Tazrut and Chefchaouen, which are located some distance away.⁶ A number of pilgrims have left prose and verses behind which, along with the heritage of religious songs, add a rich cultural legacy to the sanctuary of Ibn Mashîsh. The first significant manuscript concerning this site —"Healing illnesses by tasting the traces of the Master of al-'Alam", a title that explains the function of the pilgrimage and the main attraction of the site— dates from four centuries ago.

Jabal La'lâm also plays a highly significant role in the political history of Morocco. During the 15th and 16th centuries, facing danger of invasion from the North, the Banî 'Arus and other Rif tribes gathered at the shrine of Ibn Mashîsh to pledge to intercede and defend the country and its sacred values with their lives; their efforts proved successful.

3 A widespread traditional belief and practice in Morocco.

4 For the commentaries on this prayer, see Zouanat Z. (1998), *Ibn Mashîsh, maître d'al-Shâdhîlî*, n.p., Casablanca.

5 Al-Rhûnî A. (1953), *Târîkh Titwân*, n.p., Tétouan.

6 Ibn Raysûn, al-Hasan (1985), *Fath al-ta'yîd fî manâqib al-jadd wa-akhîh wa-l-wâlid*, n.p., Tétouan.

Natural values

Jabal La'lâm is located in the Jbel Bouhachem region, part of the ultra Rifan fold of Numidian sandstone. Limestone rock formations constitute most of the upper sections of the mountain, whose slopes are covered with cork oak forests, with some glacis and rocky crests occupied by dwarf vegetation.

This area has the highest levels of precipitation in Morocco, with more than one meter of rain per year, although the limestone soil means the water drains quickly. The area has a range of sub-humid to humid temperate thermo-Mediterranean bio-climatic domains, depending on a particular area's degree of exposure and altitude.

The area's natural values include rich forest flora and fauna as well as an interesting cultural landscape on the lower slopes consisting of a mosaic of agricultural and pasture lands dotted with small villages sited on extensive forest matrix dominated by cork oak formations containing a high proportion of old trees.

Variations in altitude, slope and orientation allow for different types of oak forests (*zeen*, *tauzin*, cork-oak) and even pines and cedars and numerous strata of vegetation including several hundred vascular plant species.

The region's fauna is also diverse and includes 32 species of large mammal⁷ – the hyena and the panther disappeared in historical times. Over 100 species of birds nest on the site or in nearby areas, of which 32 are either endemic or endan-

gered. Seventeen species of reptile have also been identified along with 11 amphibian species, six of which are endemic.⁸

Pressures and impacts

This holy site has been under attack several times down the ages for political, military, cultural or spiritual reasons.

The relations between the sanctuary and the surrounding villages are varied, with benefits accruing to one or both sides, open dialogues and claims made by one side on the other; the property, however, concerns only the traditional custodians, who are all descendants of the saint. For historical and political reasons, relations between the Park administration and its traditional custodians are also very complex.

The Jabal La'lâm area is subject to a number of traditional uses by the local population, the main ones being trips and grazing in the forest over the entire massif (95% caprine), harvesting cork-oak, and harvesting firewood.

The main impact on the mountain forests are the uprooting of trees (cork oak) for illegal sale and insufficient cork oak forest regeneration due to overgrazing. Another issue is the sale of some holdings in Sukkân village to *non-Sharif* people, a non-traditional practice which may lead to social disturbances in the near future.

The uprooting of tree stumps, mainly in basins for the benefit of agriculture, is another real danger against which the 'Eaux et Forêts' department struggles.

7 Les Eaux et Forêts report.

8 Les Eaux et Forêts report.

The current risks with regard to the basin can be summarised in a worrying progression of uprooting in the presence of undefined land status.

The flow of pilgrims to the Jabal La'lâm shrine has been steadily increasing in recent years, and this precious natural spiritual site is currently at risk from the environmental pressures placed on it by pilgrims coupled with extremist religious interpretations, poverty and ignorance. As Regato & Salman (2007) point out: "*While the spiritual value of sacred sites in mountain areas is generally well-recognised, the environmental value which sometimes goes with the spiritual character of the sites is often ignored or damaged*".

During the year, people visit the sanctuary to attend special spiritual events. Different social class from all over the world 'ascend' to the holy place. Pilgrims come by bus and car, but also on mules when their route takes them over difficult mountain paths. Some branches of the Shâdhilî order abroad also organise massive annual pilgrimages. The summer is the season for mass visits, especially by Moroccan citizens living abroad (mainly in Western Europe), who visit the site on their way in or out of Morocco.

A serious environmental threat is also posed by various disrespectful practices ensuing from the operation of the small local traditional market as well as by pilgrims who cut branches off trees, uproot plants or take stones or soil from the sanctuary. Due to a lack of an efficient cleaning service, litter also mars the most heavily visited areas.

Visitors who decide to stay in the houses of the *Sukkân* (the custodians or inhabitants) usually insist on paying, which provides the traditional custodians with another source of income. The pilgrims, who come wanting to make contact with the sacred, generally spend their time in spiritual recreation, singing and praying to God, His prophets and saints.

A number of infrastructure projects have recently been completed by the 'Agence de Développement des provinces du Nord' to provide facilities for the pilgrims. The majority, however, have failed to integrate with the cultural and spiritual values of the site: a large concrete water tower next to the small old mosque of the angels, for example, or distribution pipes for drinking water which do not take into consideration the sanctity of the sites, and new buildings (houses and a restaurant) very close to the sacred fountain of 'Aïn al-Qshûr within the sacred precinct where the pilgrims perform their ablutions.

Conservation perspectives

Jabal La'lâm was declared a protected sacred place (*hurm*) five centuries ago by a royal decree (*Dahîr*) issued by king al-Mansûr of the Saadid dynasty.⁹ Today, the site is a communal property which belongs to the community of the descendants of 'Abd al-Salâm ibn Mashîsh, the custodians of this holy place.

In Moroccan culture and history, a *hurm* is an inviolable space, which is normally

⁹ Ibn Sûda, S. (1994), *al-rawda al-maqsûda fi ma'ithir Banî Sûda*, n.p., Casablanca.

linked to a shrine, and no violence or exploitation of any kind may take place there. The shrine normally contains the tomb of a holy person and the *hurm* encircles this tomb. According to local ancient beliefs, the holiness is transferred from the exceptional human being to nature though the fact that “the saint chose a natural site as a retreat (*khalwa*) shrine with the remains of honoured local figures located in forest groves”. Basset (2004) suggests that nature is also a central component in this site of religious significance. Jabal La’lâm covers approximately 8,000 ha and is located in the Jbel Bouhachem, itself a core area of the Mediterranean Intercontinental Biosphere Reserve established in October 2006 between Andalusia (Spain) and Morocco. Roughly a quarter of this area (2,300 ha) is considered a domanical biological reserve for which stricter protection is planned.¹⁰ Morocco’s natural heritage is also protected by forest laws drafted under the French Protectorate with some recent modifications. These regulations aim to protect the vegetation, fauna and flora of designated areas, which are placed in the charge of the Haut Commissariat aux Eaux et Forêts et à la Lutte contre la Désertification. However, this legislation largely fails to address current challenges, and Morocco lacks an appropriate legal framework for protected areas. It is hoped the new law on protected areas currently in preparation will cover this need.

There is also a discrepancy with regard to the size of the *hurm*: the Eaux et Forêts department includes only 131 ha

around the shrine in it, while the saint’s inheritors claim the historical *hurm* (property of the sanctuary) to be 1,186 ha and have taken the matter to court.¹¹ The Eaux et Forêts department is urging a gentlemen’s agreement, since the territory is covered with precious oak trees.

The Directing Plan of Protected Areas in Morocco recommends that the Bouhachem site: (i) establish a means of supervision, (ii) reinforce the human resources present at the site, (iii) create a rapid-response apparatus in case of fire, (iv) organise a campaign to raise awareness of habits and uses, (v) establish a partnership to protect areas which are not totally protected, (vi) valorise them by a rational ecotourism scheme, (vii) assist and regenerate the failing sectors, and (viii) maintain regular monitoring.¹² The village council was also urged to introduce measures to protect against littering and squatters and to prevent unsanctioned land uses on the site, while the traditional custodians were charged with preserving customs related to traditional building, including the ancestral use of oak peel as a floor covering.

Conclusions and suggestions

Although both the holiness and significance of the holy site are widely accepted and understood by both the local population and pilgrims and other interested visitors, and although the significance of Ibn Mashish is established throughout

11 Les Eaux et Forêts report.

12 Les Eaux et Forêts report.

10 Les Eaux et Forêts report.



Custodian reciting the call to the prayer over the hermitage

the Sunni Islamic world, the Jabal La'lâm site is facing new and unprecedented challenges and impacts which require a coordinated reaction if future damage is to be prevented, recent impacts restored and the quality of the site preserved as it has been for centuries.

Following the project undertaken in conjunction with Gonzalo Oviedo (IUCN) and Josep-Maria Mallarach (The Delos Initiative) in June 2008, the following suggestions can now be made:

- Promoting sustainable cork forest management; regeneration hinges on limitations being placed on caprine grazing;
- Promoting the effective and respectful management of the needs of pilgrims and other visitors in terms of park ground, water, food, lodging, toilets, etc.;
- Promoting the restoration of historic trails to make pedestrian access easier and more pleasant;
- Incorporating environmental criteria into the custodians' village, including water recollection from roofs;
- Proposing boundaries for the *hurm* which are accepted to all the stakeholders;
- Revising the project based on a holistic participatory approach that takes the full spectrum of values into account, finding the most suitable and sustainable solutions to present needs;
- Implementing effective rubbish collection;
- Informing and educating custodians, pilgrims and visitors on ecological issues;
- Improving trails and access paths.

The implementation of these actions would require improved cooperation between the institutional stakeholders at all levels, and the protection of the custodians and their legitimate rights.

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Large oak tree enclosed inside the wall around the tomb of 'Abd al Salam Ibn Mashish
On the right, the entrance of the hermitage cave



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Sacred Mountain of Ganghwa Island

Republic of Korea

Han, Kyung-Koo

The site

Although Mount Mani (or Mani-san) on Ganghwa Island, Korea, is only 469m above sea level, it is still considered one of Korea's most sacred mountains thanks to its beautiful natural scenery and because Dangun, the mythic founder of the Korean nation, is said to have constructed the stone altar of Chamseongdan on its peak and performed the first celestial offering there over 4,000 years ago. It is said that the literal meaning of Mani-san, the old name for Mani-san, is 'head (of all the mountains)'.

The sacred torch has been lit on its peak for the National Athletic Games since 1953, and a special ritual has been performed every year on October 3 to com-

memorate the National Foundation of Korea. Mount Mani, in close proximity to Seoul, is surrounded by many ancient and contemporary historic and cultural sites, while more than 500,000 people climb to its top every year, making it the second most visited mountain in Korea over several years.

Its popularity and symbolic importance for the Koreans are indicative of a deep-rooted need to preserve the mountain, but increased tourist numbers can have numerous adverse environmental effects on the soil, landscapes, fauna and flora. Public support for the preservation of the natural, cultural and spiritual values of Mount Mani, as well as the cancellation of any unsustainable development projects, is of key importance.

Natural values

Mount Mani is located on the South-western coast of Ganghwa-do, Korea's fifth largest island. Long and thin, Ganghwa-do stretches from Northwest to South-east, offering tremendous scenic beauty. Mount Mani was originally an island called Goga-do [Goga Island] which remained separate from Ganghwa-do until 1706, when the two were connected by a large-scale reclamation project initiated by the government to increase available arable land. Ganghwa-do lies in the estuary of the Han River on the West coast of South Korea, and is separated from the mainland by a narrow channel, which is bridged at several points. Approximately 65,500 people live on the island, most of whom are farmers (ginseng and rice) and fishermen. Covering 302.4 km², the island accounts for most of Ganghwa county in Incheon City, which consists of 29 islands in the Yellow Sea.

At the foot of Mount Mani, an area of tideland is home to cranes and other migratory birds including wild duck, the spot-

billed duck, the shelduck (*Tadorna tadorna*), the sheldrake, the greater white-fronted goose (*Anser albifrons*) and a great many others. The total area of the tideland is 11,217 ha, or up to 10.5% of Korea's total tideland. According to both the WWF (World Wide Fund for Nature) and IUCN (International Union for Conservation of Nature), the Southern tideland (80 km²) and its ecosystem are in grave danger and need to be designated a preserved area under the Ramsar Convention. This tideland is extremely important, because it is home to endangered migratory species including the black-faced spoonbill, cranes and the white-fronted goose.

The forests of Mount Mani are relatively well-preserved, with climax communities of Japanese Red Pine (*Pinus densiflora*), Korean Hornbeam (*Carpinus coreana*) and Japanese loose-flowered Hornbeam (*Carpinus laxiflora*) that are considered to be of significant value, as well as deciduous broadleaved large trunked trees covering its slopes. Sagi-ri, Hwado-myeon, near Mount Mani provides habitat for the trifoliolate orange (*Poncirus trifoliata*), which

Soil erosion caused by increasing visitor numbers



has been designated a Natural Heritage species by the Korean government. According to a survey conducted by the Natural Ecology Division of the Korean Ministry of the Environment in 1999, the flora of Mani-san includes 245 genera and 90 families. The Korean Hornbeam has been designated a protected species.

The institutional framework for protecting the area seems in need of strengthening. The whole mountain area was designated a National Tourist Resort in 1977, but this has often been criticised for being development – rather than preservation-oriented. Coordinated efforts are needed for the sustainable conservation and development of the area.

The natural habitat of Ganhwa Island has been generally well-preserved until recently, thanks to its proximity to the Demilitarised Zone. As the channel to the North of the island serves as the *de facto* Western border between South Korea and North Korea, much of the island was designated an Area Preserved for Military Use. Tension between North and South discouraged real estate development on the island, while other environmental regulations contributed to the protection of the environment. However, with the improvement in relations between North and South Korea, land prices on the island have risen. As more and more people want to visit and stay in the area, Ganghwa-do has attracted real estate developers and businessmen involved in tourism. As such, numerous hotels, restaurants, country houses, etc. have been constructed there, while the local agricultural economy is on the way to being transformed into an urban / tourist society. The preser-

vation of the landscape and environment is thus both a crucial and a current issue.

Spiritual and cultural values

At 469m, Mount Mani does not number among Korea's highest mountains, though it looks considerable higher because the mountain rises from the sea level. As mentioned above, Mani-san was originally called Mari-san (摩利山), and was also called Maru-san and Duak-san (頭嶽山), all these names being derived from 'meori', which means 'head' or 'top', and denoting the 'head mountain'. According to popular belief, the name of the mountain was changed by the Japanese as part of its policy of symbolic aggression and manipulation. However, some point out that the name of Mani-san was already current in the late Joseon period (1392-1910), and others that, applying the pronunciation rules of Korean, Mani-san and Mari-san would be read in the same way – which is also true of Mt. Hannasan and Mt. Hallasan on Jeju Island.

Mount Mani is thought to be equidistant from the country's other two most sacred mountains: Mt. Baekdu (Changbai-san in Chinese) on the Korea-China border, the highest mountain in the North, and Mt. Halla on Jeju Island, the highest mountain in the South.

Specialists in geomancy or *pungsu* (風水, Feng Shui) generally agree that the *ki* (force 氣) on Mount Mani is the strongest in the whole of Korea, which is yet more proof of the mountain's sacred nature. Thanks to the Koreans' increasing interest in health and well-being in general

and recent media coverage in particular, Ganghwa Island and the Mount Mani area has become a popular spot for 'wellness' tourists, and one can see newly-constructed paths on the mountainside of Mount Mani along which tourists walk barefoot to receive the strong *ki* (force) from the soil of Mount Mani and regain their spiritual and physical health.

Legend tells us that Dangun, the mythic figure who founded the first Korean state at the foot of Mt. Baedu, chose this place to make sacrifices and had Chamseongdan built by Baedalshin (Wunsa: he who governs the clouds) in the 51st year of his reign (i.e. 2283 BC). A granite altar on the North side of Mount Manisan was designated a Historical Site in 1964. The altar is not in its original condition, having been repaired in 1270 during the reign of King Wonjong of Goryeo and again during the Joseon period in 1639 and 1700. Its current appearance with the rounded bottom and square upper section, which seem to symbolically reverse the natural order by placing the earth (squared in East Asian cosmology) on top of heaven (which is rounded), is thus the result of these repairs. The altar is 10 *cheok*¹ (3.03m) high with sides 6 *cheok* 6 *chon* long (1.99m); the circle has a diameter of 15 *cheok* (4.55m). There are twenty-one stone steps to the East. Unfortunately, no reliable information can be found on the symbolism of this altar.

Since time immemorial, Koreans have enjoyed a special relationship with their mountains. As places close to heaven and as embodiments of sacred beings,

mountains have always been important religious areas. For example, the Kingdom of Shilla had five mountains designated as the Five Holy Mountains and sent state officials to perform annual services in appreciation of the protection provided by the celestial and mountain gods. Since the Chinese emperor claimed the exclusive privilege of direct communication with heaven in traditional East Asia, the Korean myth of Dangun building the altar on Mount Mani and performing rituals is tantamount to a Korean declaration of independence in the China-centred world order. The ceremony of sacrificing to the heavens was stopped during the colonial period (1910-1945) but revived after liberation. The Korean government in Seoul designated October 3 Gaecheonjeol, meaning 'Celestial Opening' or 'National Foundation' Day, and officially named Mount Mani the most nationally important mountain in South Korea.

As a sacred place for national identity and a symbol of a celestial mandate, Mount Mani is also visited by ambitious politicians. For example, former presidential candidate Mr. Sohn Hak-Kyu climbed Mount Mani on New Year's Day 2007 to confirm his promise of national unification and welfare.

The Samrang Fortress, a designated Historical Monument on Mt. Jeongjok some five kilometres to the Northeast of Mount Mani, was allegedly constructed by the three sons of Dangun. In the fortress, one can visit the famous Jeondeung-sa fortress temple and the State Archive building, which was used to store copies of the historical records of the Joseon Dynasty in case the originals were destroyed. A num-

1 1 *cheok* = 30.3cm

ber of other historical sites are also in close proximity to Mount Mani, including the Janggot Battery (designated a Monument of Incheon City) and several Buddhist temples, including Jeongsu-sa (designated a National Treasure), Jeokseok-sa, Baengnyeong-sa and Cheongnyeong-sa.

Ganghwa Island is full of historical and cultural remains. Prehistoric dolmen are found in large numbers on the island, indicating that the island has been inhabited since time immemorial. The reclamation work has, however, changed the coastline of the island, while is now home to a large number of rice fields.

Ganghwa Island also symbolises Korea's heroic but tragic struggles against foreign invasion. Before the construction of bridges, the channel separating Ganghwa Island from the mainland was extremely difficult to cross because of the large difference between high and low tide, which served as an invincible natural defence against invaders. It was on this island that the court of Goryeo (918-1392) took refuge in 1232 when the Mongols invaded again, and the island served as

the Goryeo capital for thirty-six years during the struggle against Mongol domination. When Goryeo finally capitulated to the Mongols, the elite forces on the island rose up, starting the four-year Sambyeolcho struggle against the Mongols.

In the early 17th century, when the Manchurian invaders succeeded in crossing the channel and captured the royal refugees on the island, Ganghwa Island lost its strategic significance as an invincible fortress, though it continued to constitute an important defence for Seoul.

When the disturbing news of the Opium War reached Korea, Ganghwa-do Island was fortified as one of Seoul's outer defences. In 1866, the French fleet attacked the island, supposedly in protest at the suppression of the Christian religion but really to force Korea to open up, and a French landing party burned and plundered Korea's Royal Library as well as its defence facilities. The island was attacked again in 1871 by the US fleet, when gunboat diplomacy failed to open Korea's doors (as it had done in Japan). The US navy inflicted heavy casualty on

Path with hand rails to ensure walkers' safety





Path to be walked barefoot to receive Ki force

the Korean defence forces, but could not persuade the Korean court to change its policy. In the end, it was the Japanese who forced Korea to open up by despatching a warship to deliberately enter Korean territorial waters near the island and provoke the coastal battery into firing and then exploiting the Ganghwa Island Incident, as it was known. The resulting Ganghwa Island Treaty of 1876 was designed to open Korea up for Japanese trade by forcing the nation to open three ports and grant Japanese many of the rights and privileges Westerners enjoyed in Japan. The Ganghwa Treaty marks the start of Korea's tumultuous journey toward modernisation, and the other treaties that followed with other major powers would ultimately lead to the tragic loss of Korea's independence.

Pressures and impacts

Ganghwa Island and the Mount Mani area has been a centre for human activity since prehistory. Dolmens, rice fields reclaimed

from the sea, Buddhist temples, the remains of the Goryeo and Joseon palaces, fortifications and coastal batteries all indicate intense human activity. The new infrastructures and tourist facilities are also conspicuous that serve a great number of visitors attracted by the area's relatively pristine nature, its close proximity to Seoul and its cultural and spiritual values. It is important to note that the symbolic significance attributed to the area by the public could play a key role in conservation efforts.

The huge number of tourists has proved damaging to the soil, flora, fauna and scenery. The two most serious conservation issues facing Mount Mani are overuse and overcrowding. The number of visitors did not exceed 95,000 in 1983, but increased steadily during the late 1980s and 1990s as a result, in part, of rising standards of living and increased car ownership. In 2003, more than 413,000 people purchased admission tickets at the foot of the mountain. Most of these visitors were not pilgrims in the strict sense of the word, though, as Ko-

reans who adhere to the Dangun myth, many of them express feelings of awe in their accounts of the visit. Although the number of visitors stopped increasing after 2004, the damage was already done: trampled by the feet of over 400,000 visitors per year, many trees on Mount Mani have had their roots uncovered, and the soil has suffered from erosion and hardening; like many other mountains, Manisan is also littered with garbage left by careless visitors.

Several years ago, the local authorities enraged many conservationists by sinking hundreds of iron poles into the rock and installing a safety rail to ensure visitor safety. Some visitors welcomed these safety measures, though others believed the agency had unnecessarily damaged the natural environment. Of course, the rail would also allow more people to visit the remote paths and areas, and thus posed a further threat to the area's already fragile ecosystem.

There is a good deal of pressure for development. The local authorities have announced several ambitious plans to reclaim the tideland, to build a power plant and to develop the area into a tourist resort. For example, the Hwabuk Project, announced in 1995, sought to reclaim and develop the vast tideland along the Southern shores of Ganghwa Island, while the government and the Korea Hydro and Nuclear Power Company announced a plan to build a thermal power plant on Seokmo-do, an island located just 1.5 km to the West of Ganghwa Island, in 1996. In 2006, the Municipality of Incheon announced plans to develop the Mani-san area by investing more than

\$56 million in redeveloping an area of 645,388 m². The initial plan also included schemes to develop the Hamheo-Doncheon sector as an accommodation and camping zone, and the Sangbang sector as a culture and sightseeing zone – which would involve the construction of a Local History Museum, a Dangun Myth Centre and a Recreation Park. The local authorities' attempts to secure financial support from the national government and to attract private investors did not, however, prove successful.

It is ironic that the environment of Ganghwa Island should be threatened by plans for the 'peaceful' use of the Demilitarised Zone presented by presidential candidates in 2007. Although these plans were supposedly environmentally friendly and designed to win UNESCO Biosphere Reserve status for the zone, they have been criticised for containing unsustainable development practices.

Conservation efforts

Many of these planned developments ran into strong opposition. The Hwabuk Project was finally cancelled in 1999 due to strong public protest in favour of conserving the tideland, while the plan to build a thermal power plant was also cancelled, both because of the rising price of liquid natural gas, the fuel on which it was to have run, and due to protests voiced by environmental activists and concerned citizens. This protest movement provided the impetus for the birth of the Ganghwa Island People's Network (Ganghwa-do Simin yeondae) in May 1997. Concerned citizens, local opinion-makers, feminists,

religious groups and students joined forces to compile a report critical of the short-sighted policies espoused by Ganghwa County local government, which sought to increase revenue from tourist resort development by destroying the tideland and the forest. The 'Ganghwa-do Green Project', as it is called, also proposed the drawing up of a tideland ecosystem and landscape preservation programme which would take the ecology of each village into account, employ environmentally-friendly agriculture and offer environmentally-friendly tour programmes focused on local cultural traditions (festivals, rituals, lifestyles, cultural remains, etc.), migratory bird watching and the exploration of the tideland ecology (including mud packs and shell gathering).

There have also been some hopeful developments: In an effort to conserve nature, Ganghwa County designated 45 ha of the Sangbang sector as a Mountainous Region Protection and Purification Zone, while Incheon municipal government designated 24 protected species of animals in 2006. These measures include the observation and analysis of the changes to the Mount Mani eco-system, as well as the protection of the animals in the area.

However, it has become clear that conservation efforts cannot succeed if they fail to take the socio-economic wellbeing of the people who live in the area into consideration. For example, the attempt on the part of the Ministry of Marine Affairs to designate 300m² of tideland on the Southern coast of Ganghwa Island, a Marine Ecosystem Preservation Zone, ran into strong opposition from residents

and local businesses, most of whom were motivated by a fear of restrictions on further development and an interest in short-term financial gains. More than seven years have passed since then, but the government has only succeeded in designating some 60 m² as a preservation zone.

Recommendations

Six recommendations can be made to improve the conservation of Mount Mani's natural, cultural and spiritual heritage. The basic ideas, which are in need of further elaboration, are:

- Supporting the local initiative aimed at developing an effective conservation government system. A number of scholars and NGO leaders (including the members of the Ganghwa-do People's Network) have gathered to discuss the future of Ganghwa Island, the problems inherent in development and the conservation of nature. Although undoubtedly a positive development, their concerns have yet to result in a systematic approach. The residents of the island are vulnerable to the temptations of the short-term benefits generally expected to accrue to development plans, while the limited experience of the local authorities, which pay lip service to and support in principle the conservation of the environment, renders them unable to foresee future concerns. The combined efforts of scholars, experts and the local community have proved successful in persuading the local authorities to put in place a network for the exchange of

ideas and the building of consensus in the formation of strategic plans for the wise use of natural resources. This may evolve into some kind of administrative body regulating the scope and speed of development.

- Raising environmental awareness at a national and international level. If this local initiative is to succeed and develop into an effective form of administration, national and international support is vital, since it would greatly enhance the position of local and national activists in their efforts to conserve nature.
- Establishing a new regime in the area. The area should be designated part of the National Park. Although there are many people who are not satisfied with the lax rules in force in Korea's national parks (which are, for instance, vague about land use practices), such a measure would contribute to the conservation cause. Special attention is required for the protection of tideland.
- Drawing up and implementing an entirely new approach to the sustainable conservation of the Ganghwa-do Island as a whole. Such an approach would consider issues such as protecting the ecosystem and tideland, preserving historic sites and cultural remains, promoting alternative forms of tourism (i.e. ecotourism and cultural tourism) and large development projects in an integrated manner.
- Conducting interdisciplinary research into the spiritual, symbolic, social, and cultural characteristics of the area. Historians, cultural anthropologists, sociologists of religion and political scien-

tists could join forces and contribute significantly to understanding and conserving the site's distinct values. Such studies will constitute an important contribution to the conservation of the natural environment and cultural remains, which are vital for the environmentally-friendly development of ecotourism and cultural tourism envisaged in the plans for sustainable development.

- Making serious efforts to give due consideration to the people affected. It is important to provide compensation and / or feasible plans for environmentally friendly development as well as financial and technical supports for the residents of the area to be affected by the proposed conservation measures.

Mount Mani-san and Ganghwa Island are symbols of Korea's ancient history, mythic national origin, national identity and struggle for spiritual and political independence. They are closely related to the ancient traditions of mountain worship, hermits and ascetics and remind everyone of the battles Koreans have waged against the invading forces of old empires and modern imperialists. Its tidelands and migratory birds are now under threat from tourist development, while the entire area is at the centre of ambitious development plans and political controversies (e.g. the thermal power plant), which are not in keeping with the effective conservation of the natural and cultural environment. Mount Mani-san and Ganghwa Island is a place where empowered local citizens can develop a new system of governance for conservation with the help of committed scholars and professionals.

Glossary

Geomancy (風水, Pungsu in Korean, Feng Shui in Chinese)

Pungsu or fengshui, literally 'wind and water', is a method of divination developed in East Asia for locating favourable sites for cities, residences and burial grounds. The practice maintains that the happiness and prosperity of a person, family or entire nation is favourably or adversely influenced by the positioning of the burial place of ancestral bones, residential buildings or the capital city. Geomancy is underpinned by the belief that vital energy forces ('ki') flow under the ground, and that auspicious nodes are formed where the vital energy accumulates. Since parents are the main bodies of their children (like the trunk of a tree with branches growing out of it), their bones – when enveloped in vital energy in their burial site – can exercise an auspicious influence on the fortunes of their children.

Force (氣, Gi or Ki in Korean, Qi in Chinese)

Gi is a vital force that underlies the functioning of the body, mind, and spirit. The concept, together with 'li' (理, pattern, form, order, regularity, reason) is fundamental to philosophical thoughts and various practices in East Asia, including architecture, art, traditional medicine, magic and the martial arts. Excessive loss of gi force or disharmony in the balance of gi can lead to loss of life or health, or misfortune and disorder in society.

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Historic Archives Building





Solovetsky Islands: a holy land surrounded by the Arctic Ocean

Russian Federation

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Introduction

The essential features of the Solovetsky Archipelago are similar to those of other holy places. During the 13th and 14th centuries, the holy islands of Russia's Northern territories were considered a hospitable place for saints and hermits. The remote areas of the Solovetsky Archipelago became a symbol for the Russian Orthodox Church in much the same way that Mount Athos came to symbolise Greek Orthodoxy. However, recent research and archaeological remains indicate that the archipelago was sacred long before the appearance of the first Orthodox Christians in the area —for instance, the largest collection of prehistoric stone labyrinths in Russia are to be found in the Solovetsky Archipelago.

Between the 15th and early 20th century, the Solovetsky Islands were governed by one of the most famous Russian Orthodox monasteries: the Saviour-Transfiguration Monastery (or Solovetsky Spaso-Preobrazhensky Stavropigial'ny muzhskoj monastyr' in full, with Solovetsky being the name of the archipelago on which the monastery is located [it comes from the indigenous Finno-Ugric name for the islands —“suola vesi”— which means “salt water”]; *Stavropigial'ny* referring to the fact that the monastery is under the direct supervision of the Patriarch of the Russian Orthodox Church rather than the Bishop of Archangel; and *Spaso-Preobrazhensky* being the name of its main catholicon, which is dedicated to Our Saviour of the Transfiguration). (image in pp. 90-91). The monastery was founded



Solovetsky Monastery: general view

by three hermits, German, Savvaty and Zosima, who are all saints of the Russian Orthodox Church.

The Solovetsky Islands are located in the middle of the White Sea, 165 km south of the Arctic Circle in the land of the Northern Lights, long dark winters and white summer nights. They encompass over than 100 islands and cover 300 km² in total. The largest islands are Bolshoy Solovetsky, Bolshaya Muksalma, Malaya Muksalma, Bolshoy Zayatsky, Maly Zayatsky and Anzer. The islands have a wide range of landscapes despite their proximity and limited extent, including taiga forests where spruce and pine dominate (60% of the total territory), forest tundra (10%), tundra (5%), marshes (12%) –including aapa mires– and some 500 lakes (13%). The highest points of Solovetsky Arcipelago (Sekir-naya and Golgofa Mountains), are under 100 metres in height. The islands' unique climate permits species of flora and fauna not normally found at this altitude.

Natural values

The Solovetsky Archipelago contains ecosystems of sub-tundra forests and forest-tundra crooked forests, which are considered to comprise a zonal ecosystem. The islands are intersected by the 12°C isotherm for July, which marks the boundary between the Northern taiga and forest-tundra zones of Northern Europe. The formation of extrazonal tundras on the islands can be attributed to the cooling effect of the sea and to the prevalence of cold North-easterly winds during the growing period. Herbaceous and herb bilberry shrubs similar to their middle-taiga counterparts grow in this region due to an intense convective heat-flow anomaly whose source is probably a diapir fold involving the upward movement of the mantle.

The archipelago is rich in flora, with 378 native species including 11 rare orchids. A number of rare bird species are also present, including the cormorant (*Phalacrocorax carbo*), whooper swan (*Cyg-*



nis cygnis), white-tailed eagle (*Haliaeetus albicilla*), marsh harrier (*Circus aeruginosus*), merlin (*Falco columbarius*), hobby (*Hypotriorchis subbuteo*) and kestrel (*Cerchneis tinnunclus*). There is a unique colony of Polar tern (*Sterna paradisea*) on Malaya Muksalma island; occasionally exceeding 800 nestling couples, it is one of the largest colonies in Europe.

Rare ecosystems are represented by coastal tundra (4.5% of the total territory) as well as herbaceous and herb bilberry areas. The coastal tundra is concentrated on the small islands of Bolshaya Muksalma, Malaya Muksalma, Zayatskie (Hares) and the Eastern part of Anzer island. Reindeer have been successfully introduced onto Cape Kolguy, thanks to the unique species of tundra mosses which can also be found on the South-eastern part of Bolshoy Solovetsky island. The central and Northern part of this island are covered in spruce, mixed and small-leaved forests. Areas of motley grass resemble those found in middle taiga. This

herbage is the main characteristic of motley grass forests, e.g. forest geranium, oxalis, forest peas, etc. These ecosystems are not in keeping with the local climate and would not be able to survive without geothermal heating.

Bolshoy Solovetsky Island: 45 species of flowers grow on the dry meadows of Saint Isaac's Hermitage (Isakovo). These species are listed in the Red Data Book for the Archangel region and amount to 30% of the total number of species identified in the area. Isakovo is also a nesting place for a number of bird species, which are also listed. Every year, approximately 90 white whales reproduce off Cape Belushy (which actually translates as 'White Whale Cape') on Big Solovetsky Island during July and August.

The Solovetsky Islands have hundreds of lakes, with most of the smaller lakes being of the deep reservoir type. The bottom of the lakes in the Solovetsky Archipelago are located below sea-level

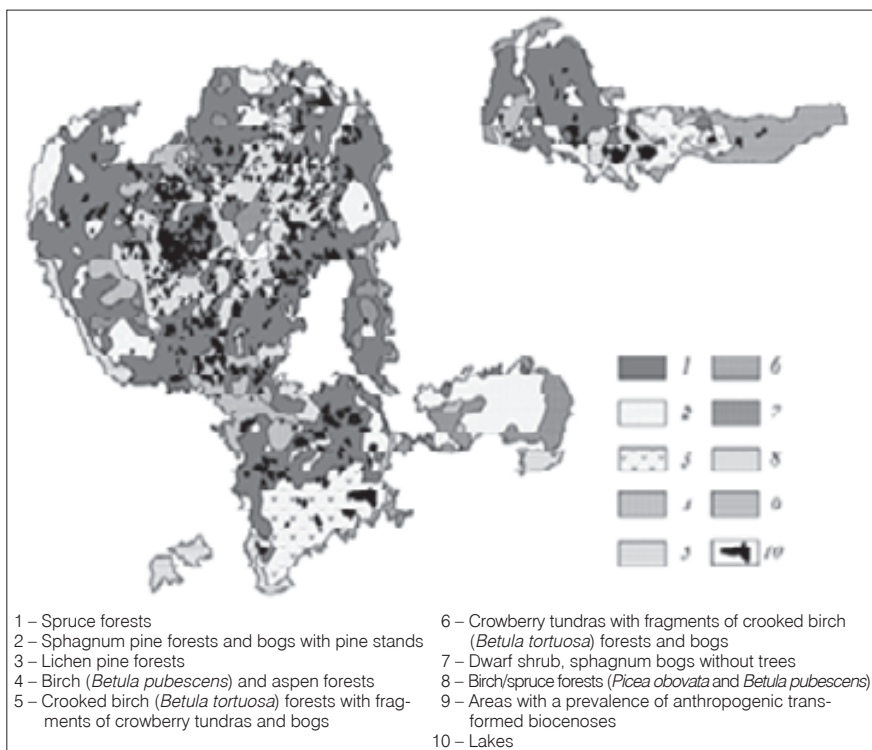
(Krugloe Orlovo Lake, for example, has a bottom 6m beneath sea-level) due to their hollows being crypto depressions. Nonetheless, all the lakes have super-fresh, very soft water. The aapa-type mires, which provide habitat for several rare birds species, are scattered across the Solovetsky Islands, and can be found in the Pechakovskoe and Bere-zovo-Topskoe areas of Bolshoy Solovetsky Island and in a large mire complex (1200 ha) in the Eastern part of Bolshaya Muksalma Island (maps in pp. 92 and 93).

Cultural landscapes

The unique reclaimed meadows on the Sekiro-Voznesensky, Savvatyevsky and Isakievsky Hermitages on Bolshoy Solovetsky Island, the Golgofa-Raspyatsky and Svyato-Troitsky Hermitages on An-zer island and the Svyato-Sergievo Ra-donezhsky Hermitages on Bolshaya Muk-salma Island are significant examples of man-made landscapes created and sus-tained by the monastic population for hay.

During the 16th-19th centuries, the monks on Bolshoy Solovetsky Island began

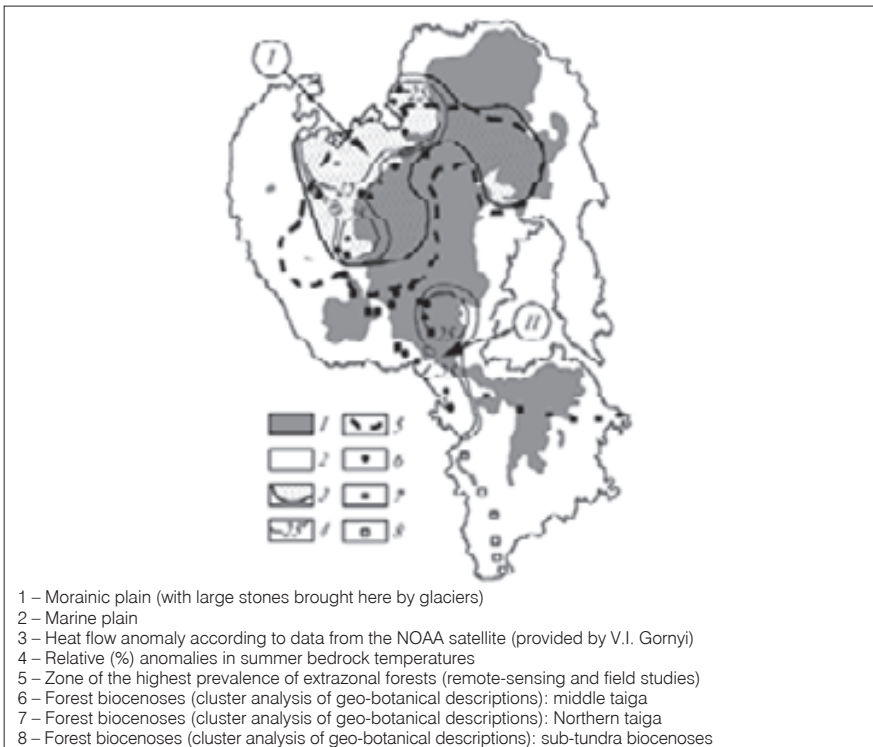
Vegetation map of the Solovetsky Islands (based on remote-sensing data from the Landsat 7 satellite and the results of geo-botanical studies in the field; generalisation at a 15-pixel level)





The Wild Rose in the Bothanic Garden: a present from Panchen Lama to the Solovetsky Monastery

Diagram comparing the location of (I) Sosnovskaya and (II) Central CHF anomalies with the zone of distribution of extrazonal forests on Bolshoy Solovetsky Island





The labyrinth on Bolshoy Zayatsky Island. In the background the Church of St. Andrew, built by Tsar Peter the Great

connecting the lakes with canals which helped drain the marshland and contributed significantly to the formation and maintenance of the area's meadows and forest complexes. These former mires need human intervention to remain as meadows. Nowadays, this unique meadows complex is being degraded since the lake and channelling systems are no longer fully functional after a century of neglect. The system contains 65 lakes connected by 69 channels, 16 dams (*bunds*), six ladders and four locks.

The Makarievskaya Hermitage on Bolshoy Solovetsky Island is the Northernmost botanical garden in Europe. The garden was started in 1822, and its collection of plants includes 426 species. Surprisingly, these plants have thrived in these extreme climatic conditions.

Bolshoy Zayatsky [Big Hare] Island is a unique natural and cultural complex and home to the largest complex of labyrinths and sacred places in Russia's Eu-

ropean North; they date back to the 1st-2nd millennium BC. The island has a tundra-type extra-zone natural complex with nesting places for birds listed in the Red Data Book for the Archangel region.

Spiritual and cultural values

The Solovetsky Archipelago was a sacred place for prehistoric and early historic cultures. The Archipelago contains about 1,000 sacred stones (dolmens, seeds, stone works) dating from between the Neolithic / Early Metal Age and the Mediaeval period. The Solovetsky Islands are the Easternmost site of Northern Europe's stone labyrinths (more than 30 labyrinths have survived) (image in p. 94). The Solovetsky Saviour-Transfiguration Monastery began as a wooden hermitage for three monks – German, Zosima and Savvaty – in the 15th century (these initial wooden buildings have not survived). The monks later became the patron saints of the White Sea (image in p. 95).



The icon of Saint Zosima and Saint Savvaty holding Solovetsky Monastery

In 1429, the Solovetsky Monastery was established and significantly affected the spiritual and economic life of Northern Russia. In 1552, the construction of the Uspenskaya Church (church of the Dormition of the Mother of God), refectory and cellarer's chambers began. The Arctic Ocean's 'fortress of the spirit' resembles a real fortress with its five monumental towers constructed out of large boulders. Its main cathedral, built in 1558-1566, is the cathedral of the Saviour-Transfiguration. The idea of Transfiguration is conveyed in Russian with a word synonymous with 'transformation', and the idea of the Holy Land of the Russian Orthodox Church is present here in site names like Golgofa-Calvary, in the transformation of land though the construction of a system of channels, dams, fish ponds, and in the hermitages created on different islands in the Archipelago. In the Makarius Hermitage, for instance, a botanical garden was created with herbs, apple trees, roses, shadberries, etc. in 1822, while

monks of the Solovetsky Monastery who visited the Pamir Mountains in the 19th century were given the large-fruited dog-roses, lilacs and bergenias in the Solovetsky botanical garden as gifts by Panchen Lama (image in p. 93). Surrounded by the cold waters of the White Sea, the Archipelago came to symbolise the Garden of Eden. The monastery has been a popular destination for tourists and pilgrims since the late 18th century; indeed, the holy community introduced a tourist information office for people visiting the area in the early 20th century, along with accommodation (a hotel) and transportation. The monastery still receives thousands of pilgrims on an annual basis.

The place names in the Solovetsky Archipelago bear witness to the tradition of the Holy Islands. For instance, there is the Svyatoye ozero [holy lake] near the monastery, while the highest mountain on Bolshoy Solovetsky Island is named *Sekirnaya* from the legend of the first

monks who settled on these islands and their conflict with a family of fishermen that had lived there before them. The wife of the fisherman was angry with the monks and did not recognise the special spirit of the Holy Islands until she met two angels that descended out of the luminous sky and whipped her on the mountain –Sekirnaya gora means ‘mountain of whipping’. The name of the holy mountain on Anzer Island, the Northernmost island in the Solovetsky Archipelago, is Golgofa, which means ‘Calvary’ and echoes the holy site in the Holy Land (Jerusalem). The local toponymy is thus indicative of the special spiritual status of the Solovetsky Islands and serves to highlight that this is a land for monks, not common folk.

The islands further impinged themselves on the European consciousness with the publication of Alexander Solzhenitsyn’s *Gulag Archipelago* –Solovetsky Monastery was one of the first Soviet

prisons (1920-39), in which context it was also known as Solovetsky Special Purpose Camp (image in p. 96 [left]). The Solovetsky settlement was also established on the archipelago during the Soviet era in 1944; it now has around 1,000 residents.

The Solovetsky Historical, Cultural and Natural Museum / Reserve was established in 1967. Restoration works in Solovetsky Monastery started in the late 1960s. Since 1992, the Cultural and Historic Ensemble of Solovetsky Islands has been a UNESCO World Cultural Heritage site (map in p. 97). The time has come to re-designate the Solovetsky archipelago a “site of mixed cultural and natural heritage”.

After the Holy Synod of the Russian Orthodox Church of 25 October 1990, Solovetsky Monastery opened its gates again. The monastic community currently consists of 60 people (20 celibate

The iron star, a symbol of the GULAG, which was added to Solovetsky Monastery main campanile during its service as a prison. It was removed on July 27, 1984

A group of experts who hung the bells in 1992 under the leadership of Alexander N. Davydov and Vladimir M. Petrovsky



priests, 20 monks and 20 novices). The monastery plays an important role in the Russian Orthodox Church. In 1992, the relics of the creators of the monastery, saints Zosima, Savvaty and German were returned to the monastery by a delegation headed by Patriarch Aleksij II of the Russian Orthodox Church. The bells

were re-hung in the main campanile for the occasion, and the relics returned home to the sound of their chimes (image in p. 96 [right]).

The monastery was visited by some 6,000 pilgrims in 2004; the number of pilgrims has been steadily increasing in recent years.

Map 3: The spiritual heritage of the Solovetsky Islands.



1. Solovetsky Monastery of the Saviour-Transfiguration. The monastery complex contains the catholicon of the Transfiguration of the Saviour, the Church of the Assumption, the Church of Saint Nicholas and the Church of the Annunciation. There used to be a large labyrinth complex near the monastery.
2. Herring' Cape with Holy Cross.
3. The Saint Savvaty Hermitage.
4. Sekirnaya gora [Mountain of Whipping], where the Church of the Ascension also serves as a lighthouse.
5. The Saint Isaac Hermitage.
6. The Saint Macarius Hermitage with the Archimandrite's summer residence and the botanical garden).
7. Bolshoy Zayatsky [Big Hare] Island with Saint Andrew's Church and a large labyrinth complex.
8. The Jesus Hermitage on Muxsalma Island.
9. The Holy Trinity Hermitage and Anzer island's large labyrinth complex.
10. The Calvary-Crucifixion Hermitage on Golgofa [Calvary] Mountain on Anzer Island.
11. Cape Kolgui with its large labyrinth complex.

The Solovetsky Historical, Cultural and Natural Museum / Reserve is financed by the Russian Ministry of Culture, which is responsible for managing and conserving the site, but is administered by numerous museum, monastery and forestry services whose actions are not coordinated by a centralised body. Thus, while the forestry service is responsible for the protection of forests (which account for 90% of the territory of the archipelago), Cape Belushy, which needs to be assigned maritime reserve status as quickly as possible, falls beyond its ambit.

Pressures and impacts

The history of Solovskiy testifies to the heterogeneity of the archipelago's community.

Humans began to impact on the archipelago in the Neolithic period when the first tribes came to the islands. Archaeological sites discovered by Anatoly Kuratov and Alexander Martynov show that between the 2nd and 1st millennium BC

and the 1st–early 2nd millennium AD, the economy of these tribes was based on hunting in the forest, fishing in the lakes and sea and hunting walrus and seals. The people also used forest materials to build temporary constructions (which resembled the *kota* of the Sami people) and collected firewood. They gathered stones for labyrinthine tumuli and *seida*. It is ironical that fires during the 20th century would contribute to the discovery of many of these artefacts.

In the 15th century, monks felled trees to build the first wooden churches and cells. The settlers were *poslushniks*, *inoks* and monks. The most intensive impact on the islands' nature came in the 16th century, when the stone fortress, churches and channels were constructed (Uspensky and Preobrazhensky cathedrals, etc.). This was the time when many workers and craftsmen (*trudniki*) gathered on the islands to help build the fortress and the monastery. In the 16th century, a dike was built to transform one of the archipelago's bays into a fishpond (Filippovskie sadki);

Festival in Solovetsky Monastery in 2006, dedicated to the return of the relics of St. Zosima, St. Savvaty and St. German



a second dike was built and served as a road connecting Bolshoy Solovetsky and Muksalma Islands. Reindeer were brought to the Archipelago at this time from the mainland and set free in the forest.

The siege of the monastery by troops sent by the tsar (1668-1676) also had a major impact on nature. At that time, the monastery was the leader of Northern dissent within the Russian Orthodox Church.

Since the late 17th century, timber to cover the monasteries' heating needs has been imported from the Onega Peninsula.

The increasing population of the island during the 1920s following the establishment of the gulag and later, in the 1940s, following the founding of the settlement, put pressure on the archipelago's nature through practices connected with the natural economy of the region: gathering berries and mushrooms, collecting firewood, stock breeding, hunting and fishing. Pressures on the natural habitat increased significantly during World War Two (1941-1945).

In September 2005, the Institute of Ecological Problems of the North (Ural branch of the Russian Academy of Sciences) Laboratory of Nature Protected Areas and Ecology of Culture organised an expedition to the Solovetsky Islands to research the historical and cultural heritage of the region and to analyse the complex relations and conflicts between the different stakeholders.

Monastery – Local community

In 1479, Ivan the Terrible offered the islands of the Solovetsky Archipelago to

the monastery as a gift. The monastery would own the islands until 1920, when the civil war ended in the North. The arrival of monks on the Solovetsky Islands was connected to their opposition to the Pomors (the local inhabitants of the shores of the White Sea) alluded to in the legend about the 'mountain of whipping'.

The restored monastery is gradually becoming the most significant factor in the continued existence of the local community. A source of employment for locals, the monastery conducts spiritual and cultural educational activities in the region, which are coordinated by local leaders and businessmen in collaboration with the monastery. Disagreements with the local population arise in the summer as a result of the traditional practices of pilgrims: entire areas where mushrooms and berries grow are devastated by the pilgrims, depriving local residents of the opportunity to gather those gifts of the forest.

The monastery traditionally does not over exploit natural resources. The population of the settlement has a greater environmental impact on nature, mainly as a result of its unsanctioned activities in the forests. Increasing pollution caused by waste around the settlement and on the roads is another major environmental burden.

Monastery – Museum

Solovetsky Museum is a federal institution under the jurisdiction of the Ministry of Culture of the Russian Federation. The Solovetsky Monastery is under the direct jurisdiction of the Patriarch of Russia.

The problem of managing the archipelago's heritage stems from ambivalence surrounding ownership of the Solovetsky Islands: given that the law states that the cultural heritage of the archipelago is the responsibility of the museum, it is not clear whether the islands belong to the museum or to the monastery. The issue has become still more complicated following a statement by the former President and current Prime-Minister of Russia, Vladimir Putin, concerning the illegality of past confiscations of church property. This has been perceived by some as an appeal for restitution.

The museum has now commercialised its activities, which itself creates environmental problems largely stemming from the sometimes inappropriate behaviour of the islands' increasingly numerous tourists. The museum allows tour operators to buy or rent land in the archipelago for long periods of time.

Museum – Local community

According to a resolution authorised by the government of the Archangel region in 1980, the entire territory of the archipelago, including its cultural and natural heritage, belongs to the museum. The same legislation states that the territory of the archipelago comprises a single administrative unit: the Solovetsky district of the Archangel region. In practice, the local government administrates only the settlement area.

Forestry – Local community

Some 95.6% of the archipelago's territory is under the jurisdiction of the Solo-

vsky forestry commission. The commission limits several activities on the part of the territory's local community, which is protected by the Forest Fund (Federal organisation).

Forestry – Museum

The jurisdiction of the forestry commission overlaps in parts with the museum's jurisdiction over the archipelago's cultural and natural landscape. The subject of the ownership of the forests is highly sensitive. Even if the problem of the recreational use of the forests is resolved, the overlapping authorities mean that the museum seems to be infringing on the commission's jurisdiction. The museum has proposed leasing the entire forest area to the forest commission *gratis* as a solution to this problem. The forestry commission has refused this proposal.

Forestry – Monastery

As Archimandrite Joseph has stated: "The natural environment around the Solovetsky Monastery must be carefully managed by the monks as it has been for five centuries". The question of renting part of the forest to the monastery has not been discussed at all.

Concerning the *protection status* of the archipelago's natural heritage values, the situation can only be described as paradoxical. The Solovetsky Cultural and Historical Ensemble enjoys the status of a UNESCO World Cultural Heritage site, but the archipelago has yet to be declared a protected natural area, although its unique eco-system indubita-

bly deserves effective protection; the area around the archipelago does not benefit from any form of protection status. Five areas / complexes appear to be 'protected' at the local level: the lakes-and-channels system, Filippovskie sadki, Isakovo, the Cape Belushy area and Bolshoy Zayatsky Island. All in all, there are 54 natural heritage elements in need of protection (10 geological and geo-morphological [lithosphere] elements, 16 hydrological, 18 species of flora and five animal species).

Recommendations

The monastic complex has been a UNESCO World Cultural Heritage site since 1992 (by dint of a resolution at the 16th Session of the World Heritage Committee, nomination 'Cultural Heritage', UNESCO Certificate 14.12.1992). It has been proposed that the Solovetsky Archipelago be re-classified as a 'site of mixed cultural and natural heritage', but while the proposal was finalised in 2002, approved by the Ministry of Natural Resources a year later and presented at the UNESCO Conference on 'Conserving Cultural and Biological Diversity: The Role of Sacred Natural Sites and Cultural Landscapes' in Tokyo in 2005, the re-classification has yet to take place.

There is also a clear need to assist the holy community in issues related to the efficient management of natural resources, environmental protection, transfer of know-how (e.g. the relevant experience of the Holy Community of Mt. Athos) and other related fields.

Finally, the Delos Initiative should aim at establishing a strong network in Russia with experts and specialists in the field of cultural and environmental management. A network of this sort could support the exchange of ideas, strategies and experiences and raise awareness of the current and long-standing issues facing the Solovetsky Islands through international conferences, joint fieldtrips and other forms of cooperation on a bilateral and multilateral basis.

Conclusions

The importance of conserving the natural and spiritual heritage of the Solovetsky Islands is undisputable, given the raised interest expressed in recent years by the Russian regional and federal authorities, the Russian Orthodox Church and the wider community. It is of the utmost importance that the site be awarded 'protected area' status, as this would protect the cultural and natural identity of the region and its values, as well as defining which of them are in need of urgent protection and who the users of this heritage are.

The steps that follow should focus on continuous and concrete efforts with regard to ensuring that the spiritual and cultural values of the Solovetsky Islands are managed in a harmonious and integrated manner. It may well be that this will only happen when Russia has chosen the course it is to steer in the new century: studying Solovetsky's spiritual and social condition may afford us an insight into the phenomena and processes that may impact on this.



A Holy Cross in the White Sea near Solovetsky Monastery

Glossary of local terms

Guberny (guberny): a region of the Russian Empire governed by the governor

Eparchy: a region of the Russian Orthodox Church headed by a bishop; formerly comparable to a guberny

Gora: in Russian 'mountain', in the local, North-Russian dialect 'a hill' or even 'a high bank of a see (river)'

Inok: a coenobite monk

Poslushnik: a novice, a lay brother

Pustyn': a hermitage

Trudnik: a person who travelled to a monastery to pray but also to work for a long or short period of time (trud means "work").

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Website

www.solovky.ru

www.solovky-monastyr.ru



Part Two

Management of monastic lands and facilities

- Mount Athos (Greece)
- Other case studies
- Towards ecological management



The protected area of the peninsula of the Athos Holy Mountain

Athos Peninsula, Halkidiki, Central Macedonia, Greece

Ioannis Philippou

Konstantinos Kontos

Introduction

The Athos Peninsula or Holy Mountain is the Easternmost of Halkidiki's three peninsulas (image in p. 108 [top]) and differs substantially from the other two in terms of morphology, climate, geology and history. Over its thousand-year history, the area has acquired various names that convey both its cultural and natural / environmental importance: the Holy Mountain (or simply 'the Mountain'), because of its dominating position; the Community of the Holy Mountain; the Ark of Orthodoxy; and, the Garden of the Virgin (Theotokos).

In 1988, the Holy Mountain was designated a mixed World Heritage site, following significant efforts made and actions taken related to the protection of both its cultural and natural heritage. The entire area of the Holy Mountain has also been included in the Natura2000 network. Furthermore, the Holy Community has successfully implemented a EU LIFE-Nature project called the 'Rehabilitation of Coppice Quercus Frainetto & Quercus Ilex Woods to High Forest', and has conducted a strategic Special Environmental Study (SES) entitled 'Protected Area of the Peninsula of the Athos Holy Mountain'.

The main goals of the SES were to identify and list the management measures required to preserve and protect the whole of the Holy Mountain area with its

¹ This study was conducted by an interdisciplinary team of 20 scientists under the guidance of Professor Nikolaos Stamou, Dr Stefanos Fotiou and Konstantinos Kontos.



Prefecture of Halkidiki - Athos Peninsula



Mount Athos: the Holy Mountain

biotic and abiotic constituents, while promoting a development model compatible with the environmental and economic concerns of the local community.

The objectives of the study were:

- The preservation, improvement and sustainable management of natural habitat types and species of flora and fauna, particularly those protected by international conventions;
- The modulation of principles and rules of usage for natural resources, so as to ensure species preservation and the sustainable and integrated use of resources;
- The drafting and developing of a set of measures designed to maintain

and protect the natural and human environments; and

- Planning land use to resolve problems arising from the conflict between the need for protection, on the one hand, and production and other activities on the other.

Characteristics of the area

Initially, the study aimed to identify and quantify the various characteristic elements of the area, assessing their functions and interactions and their significance for the environment. The main characteristics analysed included the topography; flora, vegetation, forests and their management; fauna; climatic condi-

tions; natural and social functions; the effects of humankind and the surroundings.

Topography and landscape

The area presents a variform terrain (image in p. 108 [bottom]). There is a mildly wavy row of hills in the central part of the peninsula with a gradually increasing altitude that varies between 450 and 990m before climbing to an altitude of 2,033m (the summit of Mount Athos) to the Southeast.

The relief consists of deep, steep traverse gullies alternating with steeper folds. The intense relief of the Athos Peninsula is the result of the great difference in altitude between areas and by the steep slopes that rise up almost from sea level (image in p. 109). The wide variety of habitats in the area has managed to sustain itself thanks to the diverse and distinct geographical, geological and climatic characteristics found on Mount Athos.

It is these unique features, coupled with the almost complete absence of adverse

effects on the environment (e.g. there has been no grazing for centuries) that help explain the rich and extremely interesting vegetation, flora and fauna to be found on the peninsula.

The special characteristics of the surroundings, the monasteries and their architecture, the relatively limited human activity and the singular and isolated location of the peninsula have combined to make Mount Athos one of the most unique and important coastal landscapes in Greece and the Mediterranean area as a whole.

Flora and vegetation

The flora found on the Holy Mountain is another feature of its singularity. It is one of the richest areas in Greece in this respect, according to the bibliography detailing the wealth of plant life and the various endemic, rare and endangered species to be found there.

The flora of the Holy Mountain includes 1,453 plant species and subspecies, which represent 539 genera and 109

Steep slopes rising up from the sea



families. Of these taxa, 26 belong to pteridophyta, 12 to gymnosperms and 1,415 to angiosperms. The flora of Mount Athos includes local, national and Balkan endemics found in pockets or throughout the entire Balkan Peninsula. It is composed of Mediterranean (70%), North-eastern (15%), Balkan (9%), central European (4%) and local (2%) endemics.

The existence of 58 important taxa attests to the significance of the region in terms of its biodiversity. Of these taxa, 22 species are endemic to Greece (14 are local endemics) and six have been included in Annex II of Directive 92/43/EEC. A further five species have been listed with the UNEP World Conservation Monitoring Centre (WCMC) and are also on the European Red Data List, 10 species are protected by Greek Presidential Decree 67/1981, and three species are considered rare, reaching the limit of their geographical spread in northern Greece. Finally, six species are endemic to the Balkan Peninsula and extend as far as Turkey.

The Athos Peninsula is also very important for the protection of the *Quercus frainetto* (Hungarian Oak) and *Quercus ilex* (Holm Oak), which have been included in Annex I of Directive 92/43/EEC.

The human and natural environments are interdependent on the peninsula, and the two exist in harmony. This can be seen in the species of vegetation found there, their structure and composition, the way they are cultivated and managed, the methods used for harvesting forest products and the policy in place on clearance and opening up cultivable regions.

Forests

The area is dominated by forest habitats and all the natural processes that ensure their ecological and environmental maintenance and survival. Forests cover most of the peninsula (image in p. 111), with chestnuts (*Castanea sativa*) dominating its central and southern parts. The North of the peninsula is home to sclerophyllous evergreen (mostly *Quercus ilex*) vegetation in tree form, mixed oak forests (*Quercus frainetto*) and chestnut and pine forests (*Pinus halepensis*). The Southern section also contains some patches of primitive forms of vegetation, with forests of beech, fir and black pine.

Forest management

Up to 1990, the monks managed the chestnut forests of the Holy Mountain on an *ad hoc* basis. The non-intensive character of the forestry practices in place and the prudence of the monks helped preserve the forests. However, the monks' lack of silvicultural knowledge and scientific management skills led to reduced profits from forest products. Clear-cutting was the most common form of management practice in the case of chestnut forests. When the monasteries could not cover their needs (day-to-day living, heating, construction, etc.), they applied up to three treatments on their chestnut forests (two for cultivation thinning and one final clear-cutting) over a 23- to 25-year period at the longest. In addition, for some two decades (1970-90), a reduction in the number of monks made it necessary to call in professionals to exploit the forests. The tradesmen paid the monasteries a percentage of



Forest map of Mount Athos

what they received from their buyers. However, this had an adverse effect on the structure of the forests and on productivity, as most logging was carried out only in places that offered these merchants and lumberjacks the greatest profits. Mixed-aged coppice forests were created in these areas as a result.

The era of unsustainable practices came to an end in the 1990s. The new, rational

exploitation of chestnut forests was based on 10-year management plans, which marked the first efforts to convert the irregular coppice forests into high forests. At the same time, the existing method of managing the chestnut forests was improved upon through the addition of one or two extra cultivation stages and an extension of the final logging time-frame (rotation period) by 10 years from 23-25 to 32-35 years.

This management practice, which became known as the 'Holy Mountain Method', is based on periodical interventions in the chestnut stands every seven to 10 years. The first intervention, which takes place in the seventh year and is intensive, results in the production of sticks and poles. The second intervention occurs after 13-15 years and results in small chestnut products. A third cultivation stage, again intensive, is carried out after 20-25 years and produces medium-sized logs. The final clear-cutting is done when the trees are around 35 years old and offers thicker (and more valuable) timber. The chestnut cultivation method applied on the Athos Peninsula was later adopted in the management plans of all Greek chestnut forests. The method is also used —with some variations— in other European countries.

The chestnut forests of Athos are highly productive. Their production capability (volume increment) begins at two and reaches 10 m³ of timber per year, while the chestnut forest timber stock ranges from 40 m³ / ha in young stands to 210 m³ / ha in more mature stands and high-quality sites.

The evergreen broadleaf forests —and in particular the Holm Oak (*Quercus ilex*) forests— are financially exploited by most Athonite monasteries, especially those located far from the chestnut forests. Holm Oak stands are exploited through clear-cutting in a 20- to 30-year rotation. However, the wood harvested is suitable only for firewood and charcoal.

The forests surrounding the monasteries, sketes and cells were usually excluded

from the production process and exploitation, mostly to protect soil from erosion or something similar, but also on aesthetic grounds. In recent years, selective / conversion thinning projects have been implemented, in part through opportunities afforded by the LIFE project (LIFE 03 NAT/GR/000093 'Rehabilitation of coppice *Quercus frainetto* (9280) and *Quercus ilex* (9340) woods to high forest'). Today, these areas are managed as coppice forests. The project covered an area of 500 ha.

Fauna

As many as 173 species of birds have been identified in the Holy Mountain area (Poirazidis 1992, Chandrinos 1992, Chandrinos & Akriotis 1997, Vavalekas 1997). It is estimated that 102 of these are seasonal, and most are rare or endangered. Specifically, 29 species are included on the IUCN Red List, 40 species on the lists included in Directive 79/409/EEC, 134 in Appendix II of the Bern Convention, 80 in Appendix II of the Bonn Convention and two species are endangered worldwide. Some 23 species have a population located mostly in Europe, while the populations of 43 species are to be found mainly outside Europe.

In addition, 41 species of mammals have been recorded on the peninsula (Vavalekas 1997). The vast majority of these are small mammals living entirely or partly in forests (rodents, in particular). Vavalekas (1997) also reports the presence of six carnivorous species, while the largest herbivorous terrestrial mammals are the wild boar and the roe deer.

There were reports until 1980 of a final pair of wolves in the area, but they would seem to have perished owing to illness. The absence of wolves stems mainly from the geographic isolation of the peninsula, which is connected to the mainland only through a narrow strip of land in the area of Nea Roda (where there has been intense construction and tourist activity in recent years). Another reason behind the disappearance of the wolf could be the absence of livestock farming and livestock animals in the area.

Nine species of chiroptera (bats) and six marine species (cetacean and seal) have also been sighted in the area. The Monk seal has been spotted in specific areas of the Holy Mountain — particularly in its South-eastern part (however, no further research has been carried out into the presence of this species).

In sum, 22 mammals found in the Holy Mountain area are included on the Red List. Of these, 10 are in category E ('endangered'), 9 in category V ('vulnerable') and 3 in category R ('rare'). In addition,

some 24 species have been included in Presidential Decree 67/81 (on the protection of wild flora and fauna and the coordination and research processes related to these). Finally, 18 species are listed in Annexes II, IV & V of Directive 92/43/EEC, 16 in Appendix II of the Bern Convention and 10 in Appendix II of the Bonn Convention (one is also included in Appendix I).

Natural and social functions

The natural and social functions that characterise the region are spiritual, cultural, productive and protective:

Spiritual functions

The Holy Mountain has been classified by the Orthodox Church as an ecumenically sacred place where the unique truths of Christ's Gospel and His Church have been experienced. The mountain has been a site of spiritual creation for the last 14 centuries (image in p. 113). The exceptional beauty of the area's natural environment enhances its spirituality.

Monastery of Simonopetra



Cultural functions

The Holy Mountain is home to a priceless cultural treasure composed of artefacts but also accumulated cultural knowledge, tradition and a unique way of life. The various religious ‘heirlooms’ – the architecture of the building complexes and their style, the Byzantine musical tradition and the traditional way of using natural resources – are all constituent parts of its cultural importance and contribution to world heritage.

Productive functions

These functions refer to the productive capacity – of the local forests, in particular. They are characterised by a relatively high productive capacity in various sectors, such as timber, foraging (regardless of the lack of livestock breeding), agriculture practiced using traditional methods (and a few modern organic ones), apiculture, herbs and aromatic plants, fishing and water resources. All of these constitute valuable sources of income that help cover the monks’ living needs and expenses as well as the cost of upgrading and restoring the monastery buildings. They also contribute to the local economy on and around the peninsula, and especially within the prefecture of Halkidiki, both directly (people employed by the Holy Monasteries) or indirectly (religious tourism, as in the case of Ouranoupolis).

Protective functions

The protective operations are mainly focused on:

- The conservation of the forests of the Holy Mountain;

- The preservation of natural landscapes of outstanding natural beauty;
- The conservation of a large number of species of flora and special formations of forest vegetation, as well as beaches and other coastal habitats;
- The conservation of the large number of species and populations of fauna, including the wild boar, roe deer and jackal as well as marine species. The Holy Mountain is a designated wildlife refuge;
- Hydrology and fire protection. This involves the protection and maintenance of forest soils and springs, the cultivation of forests using fire-resistant species and efforts to develop a systematic control mechanism for the prevention and avoidance of forest fires.

Anthropogenic effects

Throughout the greater part of its history, the Athos environment has not been adversely affected by human intervention. There are accounts of there having been 50,000 monks and a large number of mules living on Mount Athos at one point during the Ottoman period, and of intense logging having taken place over an extended period of time, especially in the areas around the monasteries and sketes. Fortunately, the Holy Mountain’s forests have always been able to regenerate themselves naturally owing to the absence of grazing and large infrastructure projects (roads, water supply and drainage networks, large hydro-electric dams, irrigation or water-supply). For over a thousand years, the monasteries and sketes have been the only infrastruc-

ture in the area; indeed, they could perhaps be thought of as an extension of the natural and cultural environment. The most recent —and important— human intervention on the peninsula was the construction of a dense forest road network consisting mostly of technically simple and relatively narrow dirt roads; however, the project also included a few large roads which have had a highly negative effect on the landscape, in particular. The construction of this network mainly arose out of the need to protect the forests from fire, particularly those areas where flammable forest species, such as pine and evergreen hardwood shrubs, grow in close proximity.

A great fire broke out on the Holy Mountain in 1990, incinerating 2,200 ha of forest and threatening the monasteries and sketes with complete destruction.

Secondary roads have also been opened to exploit natural resources —especially chestnut and Holm Oak trees. This decision was taken in a bid to satisfy the monasteries' heating, food, construction work and financial needs, since the income —which is derived mostly from chestnut trees— covers a large part of the cost of restoration work. Most of these roads were constructed in the last two decades of the 20th century.

Over the past decade and out of respect for the area, the monks of Athos have studied the environmental impact of the construction of forest roads and, perhaps more importantly, examined past mistakes. As a result, their primary concern is now to maintain and improve the existing network of forest roads with minimal

intervention rather than adding further roads to the network. New roads are constructed only where it is deemed absolutely necessary and always within the framework of the area's fire protection plan. Both the improvement and construction of roads are now based on environmental studies; potential projects are examined and approved by the Holy Community (Forest Board) and public bodies, and are approved or rejected in view of their necessity, feasibility and functionality.

Any new developments should not be viewed as threats, however, and not every intervention has had negative consequences on the environment and the appearance of the area. The monks' way of life, their dietary habits², the limited amount of construction and the non-intensive exploitation of the environment have all contributed to the sustainable management of the area's natural resources. Economic activity today is very limited because financial profit has not been the primary goal behind the exploitation of these natural resources.

The high quality of the local ecosystems has emerged through the interaction between their special features and the manner in which they have been managed over time. This interaction has substantially shaped the dynamics of these ecosystems, which have enjoyed the most favourable prospects for sustainable,

2 The monks of Athos adhere to the traditional Mediterranean diet, which alternates between days with and without the consumption of olive oil. This diet also promotes the avoidance of animal proteins in favour of fish-sourced proteins (twice a week, except during periods of fasting). In addition, vegetables, fruit and other natural products are only consumed in season.

multifunctional management. As a consequence, these ecosystems have been classified as 'exceptional'.

It is apparent that the Holy Community's wise and prudent approach has been expressed not only in spiritual terms, but also in the management and exploitation of the area's natural resources. The sustainable management of these resources is something that all monks take into serious consideration. It is essential that this practice is maintained and supported in order to safeguard *inter alia* the traditional / cultural element in this special approach to managing the peninsula's forests and ecosystems.

Proposed environmental management measures

Undoubtedly, the general strategic goal of any management method for the Holy Mountain must be the preservation of the integrity and authenticity of the peninsula as a place of religious and spiritual importance. By extension, this overriding aim incorporates and includes the protection and conservation of the great wealth of both the cultural and environmental elements of the area.

A. The evaluation of the natural environment

An examination of the local natural environment reveals the existence of particularly important features related to the conservation of the biodiversity and natural environment in general (both species and habitats). This fact makes the region one of the most significant and

valuable natural biogenetic reserves in Greece. This is particularly important and relevant now that habitats are experiencing problems of degradation, disruption and discontinuity and being affected by widespread changes in land use. These problems beset most Greek forests and forest ecosystems today.

The evaluation of land

In order to facilitate the evaluation of the local environment, the study area was divided into four groups based on land use and morphological characteristics:

- Mountainous landscapes;
- Semi-mountainous / residential landscapes;
- Stream and riverside landscapes;
- Coastal landscapes.

Evaluation criteria

The area was evaluated in terms of its environmental value and the threats it faces, as well as with reference to its contribution to the financial, social and cultural development of the broader region. The large quantity of data assessed in the evaluation process was gathered from the management plans for the forests of the Holy Monasteries, and included information on timber stock, increment, age, site quality, silvicultural treatments, management history, a cartographic depiction of habitats and the existing bibliography. The evaluation criteria were rareness, vulnerability, extent of disturbance, representativeness, social and financial value, geographic extent, rehabilitation and res-



Zoning on Mount Athos

toration prospects, diversity and landscape quality.

The local flora and fauna were evaluated according to their population dynamics and conservation and management needs. For this reason, international conventions, existing Greek legislation and the EU directives and regulations in force were all taken into account.

B. Zoning

The zoning and demarcation of the area constitute a basic tool in the effort to achieve the objectives laid down for its protection and management. This zoning serves three main domains: environmental, institutional and socio-cultural.

The protection zones are mainly of a functional nature, meaning that they organise, regroup, classify and facilitate

the implementation of protection and management measures. Specific principles are applied in each zone and they determine the framework to be used to implement the protection and management measures.

The area classified as the 'Protected Area of the Peninsula of the Athos Holy Mountain' consists of the entire region within the administrative boundaries of the Autonomous Monastic State of the Holy Mountain plus a marine zone stretching 500m out to sea.

Three protection zones were proposed (image in p. 117), based on the analysis and evaluation of present conditions:

Zone I: An area of complete protection;

Zone II: A nature protection area subdivided into:

- Ila Biogenetic reserves
- IIb Protected landscape features
- IIc Protected coastal and marine regions; and,

Zone III: An area of sustainably managed natural resources

Zone I: An area of complete protection

Zone I includes the rocky slopes of Mount Athos and has an altitude ranging from 1,500 to 2,033m. This area is composed mainly of bushy and herbaceous vegetation and includes most of the plants endemic to Mount Athos. It is likely that it also contains some endemic insect species, but no relevant studies have been published to date to verify this.

This zone remains intact, and any – small-scale – interventions will be aimed at improving and maintaining the light infrastructure already in place, such as paths to the summit.

Some of the restrictions that should be observed include:

- i. The avoidance of any kind of exploitation of natural resources;
- ii. The avoidance of construction of new roads;
- iii. The avoidance of construction of large-scale structures and installations, e.g. dams, photovoltaic power stations, etc.;
- iv. The avoidance of mass tourism and the unrecorded visitor access (i.e. there is a need for visitor management schemes), the prevention of organised recreational and / or sporting events such as climbing; and

- v. The prevention of the collection of all types of local plants and minerals. This zone is the most characteristic, representative and significant region of the Holy Mountain. Collecting minerals, rocks or other geological formations contravenes the Athonite religious philosophy.

However, it is permitted to:

- i. Carry out work that seeks to protect and conserve the region's features;
- ii. Improve the access roads / paths using environmentally-friendly materials; and
- iii. Improve and maintain infrastructures of religious interest.

Zone II: A nature protection area: biogenetic reserves; protected landscape features; and, protected coastal and marine regions

This is divided into three sub-zones:

- Ila Biogenetic reserves;
- IIb Protected landscape features; and
- IIc Protected coastal and marine regions.

Sub-zone Ila (biogenetic reserves) includes:

- a) Areas with the remains of primitive vegetation containing beech, fir and black pine forests, as well as the forests at Krya Nera and near the Skete of Ayia Anna; and
- b) The steep regions near and along the coasts of the peninsula.

For this sub-zone, the following restrictions should be observed:

- i. Maintenance, improvement and restoration projects are to be implement-

ed only in the case of existing infrastructure;

- ii. Forest exploitation aiming at the production and trade of goods are to be prohibited, with the exception of necessary forestry maintenance and preservation projects and restoration work on the monasteries;
- iii. Construction of new forest roads is not to be permitted; and,
- iv. Access is to be denied for installations related to quarrying activities.

However, it is permitted to:

- i. Carry out projects (research or practical forestry work) aiming at protecting and maintaining the features of the region;
- ii. Improve and maintain the existing forest road / paths network in order to promote permitted activities;
- iii. Construct small structures and other buildings adapted to the particular features of the area and aimed at 'mild' forms of forest recreation that cater to the needs of religious pilgrims;
- iv. Implement low-intensity cultivation measures aimed at preserving the continuity of important types of vegetation; and
- v. Collect stones and rocks for any use on the grounds.

Sub-zone IIb (protected landscape elements) includes the 20 monasteries, 14 sketes, 'kelia' (cells), 'kalyvia' (huts), seats and hermitages located in monastic areas, and the towns of Karyes and Dafni. In

general, this sub-zone encompasses every extant historical and religious complex within the properties belonging to the 20 monasteries (image in p. 121).

Any restrictions concerning Sub-zone IIb are in accordance with the rules and specifications laid down in the Constitutive Charter of the Holy Mountain. The activities permitted in this sub-zone are those practiced to date. Since the late 1980s — a decade that saw many mistakes made in relation to the construction of forest roads— the monks and competent authorities (KEDAK, Forest Administration) have been promoting the maintenance and reconstruction of historic paved paths.

Sub-zone IIc (coastal and marine area) covers a 550m zone around the coastline of the entire peninsula. In Sub-zone IIc, the Holy Community is allowed to practice only small-scale fishing aimed at satisfying the dietary needs of the monks and pilgrims (fish is eaten two days a week, except during fasts).

In this Sub-zone, it is forbidden:

- i. For ships and boats, except those transporting passengers to and from the Holy Mountain, to approach without special authorisation; and
- ii. For any economic activity — especially related to fishing— to be carried out by inhabitants of the wider region.

Zone III: An area of sustainably managed natural resources

The remaining areas of Mount Athos are included in Zone III. These areas contain forests of chestnut, evergreen

broadleaf trees and *Pinus halepensis*. The natural resources of this area are exploited by the Holy Community to cover the monasteries' needs for goods and to generate the income necessary for financial independence. It is worth noting that there is a limited level of exploitation of natural resources, which is based on the capacity of the region and accords with the fundamental measures for the sound environmental management of the area.

The specific management measures proposed for this zone include:

1. Minimising the number of new management plans –which should have a 10-year implementation period– for all forests;
2. Preserving timber stocks at high levels;
 - 2.1 In the case of chestnut forests, the third cleaning must be applied as a general principle, meaning that the rotation age (the final logging of the stands) should be increased to 35-40 years;
 - 2.2 The view that evergreen broadleaf forests –particularly Holm Oak unions– and mainly those around and near the built environment of the Holy Mountain (as well as those visible from the sea), should be included in the process of conversion to high forests;
 - 2.3 That the *Pinus halepensis* forests in the northern part of the peninsula should be managed by implementing cultivation and regeneration logging within an 80-year rotation;
3. Intact sites (natural reserves) should be created and established as forest deposits (permanent pilot units). Even though these sites have yet to be selected, the total area of the permanent pilot units is to vary between 5 and 20 ha. These will be established for all forest habitat types present on the peninsula, with priority given to mature forests of beech, fir and oak;
4. Special protective measures for priority habitats and water resources are to be taken;
5. Financial assistance is to be provided to the monasteries to cover the environmental cost of applying the aforementioned measures;
6. Restrictions are to be placed on the construction of new forest roads; the primary forest road transport network for forest products and the main forest road network for fire protection are to be selected; habitats and the landscape affected by the construction of existing road networks are to be restored by implementing proper horticultural and technical projects; and, special attention is to be paid to the rehabilitation of the landscape along roads visible from the sea;
7. Large-scale infrastructure projects should be carried out and installations constructed in cases where these are justified because they are energy-saving (hydroelectric dams and solar energy production stations, for instance). In any event, these should be based on detailed planning which seeks to estimate their effects. Small-scale infrastructure works, such as water res-



Agios Pavlos Monastery

ervoirs for the supply of drinking water and underground water tanks, are acceptable when the location is selected with care and deemed compatible with the environmental characteristics of the area; in general, the use of renewable sources should be progressively promoted;

8. There is a need for the establishment of a waste disposal or landfill site as well as a waste treatment centre near Karyes; any such projects should include plans for further action to be taken concerning the wider consequences and effects of such works (the transportation network, aesthetic considerations, the physical landscape and other areas affected);
9. The implementation of rational rules governing agricultural practice³, such as cultivation in ranks, the prohibition

³ In recent years, some monasteries have begun participating in organic cultivation projects, mostly in the form of vineyards and the revival of old olive groves.

of clearances, the reinforcement of crop rotation and fallowing, a reduction in the use of agricultural pesticides, the optimised use of water resources for agricultural needs, waste reduction and the promotion and safeguarding of agro-biodiversity – especially of old species varieties; and

10. Intensifying control over illegal hunting and the entry of hunting dogs. Hunting is forbidden within the entire Holy Mountain region.

C. Environmental Management Body

According to the SES, a basic tool for achieving the strategic goals in the management of the cultural and environmental features of the Holy Mountain is the establishment of a new administrative body. The creation of this body will take into account the particularities of the governance of the Holy Mountain and the self-administration of the Holy Monasteries. The new body, to

be called the Environmental and Forest Board of the Holy Mountain, will be created mainly through upgrading the existing Forest Board commission.

The main goals the Environmental and Forest Board will be:

- The development of a common action framework for all Holy Monasteries within the peninsula of the Holy Mountain, that is, within the entire area designated as part of the Natura2000 network; and,
- The coordination of the accumulated experience and sensitivity of the Athonite monks towards nature, forests and the environment for the promotion of the protected area, its development, renewal and sustainable use through the implementation of modern plans, new studies and actions, and organisational projects. Such actions will focus on the multifunctional sustainable management of the terrestrial and coastal ecosystems and, generally, on the natural heritage of Holy Mountain with an emphasis on all its natural resources.

The Environmental and Forest Board will also be expected to monitor the actions of the monasteries, with a view to:

- Protecting, promoting and enhancing all the outstanding values of the area;
- Increasing the environmental awareness of the monks, pilgrims, visitors and other institutions / organisations at the local, national and international levels; and

- Promoting the environmental education of the monks, pilgrims, visitors and other parties working on Mount Athos, and assisting the Holy Community in achieving the goals stated in the SES.

The Environmental and Forest Board will consist of an Administrative Council (seven members to be appointed by the Holy Community), and will collaborate with five scientists (permanent staff) and several other external advisors. The initial work of the Environmental and Forest Board will focus on:

- a. Protecting against forest fires;
- b. Restoration techniques concerning the area's cultural and natural heritage;
- c. The maintenance and improvement of the forest road network; and,
- d. The multifunctional sustainable management of forests and the natural environment.

Following this, the remaining stages of the Environmental Management Plan are to be completed within seven years (2007-2013), and are to include these measures:

- The issuing of a regulative provision allowing for the incorporation of the Special Management Authority (that is, the Environmental and Forest Board of the Holy Mountain) into the existing legal framework of the self-administrated Monastic Community;
- The ratification of the regulative provision by the Ministry of Environment, Energy and Climate Change;

- The securing of the necessary funds for the operating costs of the Environmental and Forest Board as well as for the compensation of the monasteries (owing, for example, to the loss in income stemming from the implementation of restoration and conservation measures);
- The exploitation of all possible alternative sources of funds in order to protect the integrity and authenticity of this special area and the rehabilitation of degraded forest habitats; and,
- Ensuring the viability of the Special Management Authority for seven years and implementing an evaluation system for its effectiveness in order to make necessary adjustments after this seven-year period.

Appointing the Environmental and Forest Board as the management, protection and development authority of the protected area has indisputable advantages. Firstly, it is an authority based in the area being protected. It is also composed of members with sensitivity, knowledge and special experience, who are familiar with the specific features of the area. They have a personal investment in safeguarding the Holy Mountain, since they have taken mo-

nastic vows and living ascetic lives there. Moreover, the fact that the members of the board are appointed by the Holy Community – which represents all 20 Holy Monasteries – ensures that the board and its decisions are viewed as authoritative and valid by the people and institutions / authorities with which the board cooperates. Finally, this will raise the prestige of the body, which is important when taking the necessary action for funding management measures, structures and plans, and also in the context of cooperative efforts with national or international institutions and organisations.

Epilogue

The monks of the Holy Mountain have dedicated their lives to worshipping the Divine, and this is also expressed through the preservation of the natural environment in which they live. The Holy Community respects the natural surroundings of the area and is aware of the importance of nature, which it considers a gift from God. Thus, in its own special way, the Holy Community has repeatedly expressed its intention to continue to actively contribute to the conservation and preservation of the natural and cultural heritage of Mount Athos.

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Landscape conservation actions on Mount Athos

Athos Peninsula, Halkidiki, Central Macedonia, Greece

Petros Kakouros

Abstract

The Athos Peninsula / Holy Mountain is a mountainous landscape characterised by diverse vegetation and a complex topography whose profound beauty and diversity is preserved by an orthodox monastic community whose history goes back over 1,000 years. The Holy Mountain is a World Heritage Site.

The need for special landscape conservation actions emerged after the wildfire of 1990 and the road network that has since been developed. The Holy Community and the monasteries launched several landscape conservation initiatives aimed at restoring the forest and assessing the impact of infrastructural development on the environment and overall ecological management of the area. The first such study concerned the

ecological management of the Simonopetra area and the management plans for the forest of each monastery. An important step towards assessing the impact of the forest road network and the requisite restoration work was the study on the 'Rehabilitation of slopes along the forest road network in Mount Athos'.

The next important step towards rehabilitating the landscape was the spiritual and economic support from the Holy Community provided for Professor Dafis' call for the gradual abandonment of the coppice management of oak forests (Holm oak and Hungarian oak). This was implemented through the Life-Nature project 'Rehabilitation of coppice *Quercus frainetto* woods and *Quercus ilex* woods', which aimed to invert coppice into high forests.

Introduction

Mount Athos and its 20 monasteries has stood proud down the centuries, a lofty symbol on the Athos Peninsula denoting the Ark of Orthodoxy and Faith, a guardian of the history and cultural heritage of the land that cherishes a priceless part of society's natural riches with such devotion.

The blue sea and gentle coastline, the wild beauty of the ravines and cliffs and the dense green vegetation alongside

the monasteries and sketes that seem to hover in mid-air compose a representative picture of the timeless and close-knit relationship between Man and Nature.

This is a landscape of rare beauty and major ecological significance, exquisite architectural achievements and outstanding historical and religious value. When, during the 20th century, this unique landscape suffered a widespread degradation of its natural qualities for the first time, the monastic community responded with several initia-

Mount Athos is the highest peak on the peninsula of the same name, which forms the eastern-most part of Halkidiki in North-eastern Greece



tives which sought to reduce the adverse impact of road network projects, to enhance the ecological management of the forests, and to supervise the coppice oak forests.

The natural setting

Mount Athos is the higher peak of the peninsula of the same name and forms the easternmost part of Halkidiki in North-eastern Greece (image in p. 128). Mount Athos is also known as the 'Athos Peninsula', the 'Holy Mountain' or –more simple– the 'Mountain' (Oros), a term used mainly by people in Halkidiki and other nearby areas. Geologically, Mount Athos is an extension of the Rhodope mountain range and consists of metamorphic rocks –gneiss, greenstone, schist and limestone– with a high mineral and structural diversity.

Apart from its great geological diversity, Mount Athos has a complex topography dominated by its peak which soars to 2,033 metres. The climate of the penin-

sula is affected by the North-westerly winds and the mountain itself, which acts as a major windbreak, creating a unique micro-climate.

This geological diversity and topographic complexity combined with climatic variety, the isolation of the narrow peninsula and the absence of grazing has resulted in a complex mosaic of several vegetation types ranging from characteristic Mediterranean to alpine habitat types. Apart from the diversity of habitat types, the area is also characterised by good to excellent conservation status and considerable species diversity comprising 1,453 plant taxa (Babalonas 2001) as well as 131 bird, 37 mammal, 14 reptile and eight amphibians species (Vavalekas 2001).

The rich vegetation and complex topography of Mount Athos make for a profoundly beautiful and diverse landscape. Soft coastal landscapes can be found adjacent to deep gorges and alternate with steep coastal rocks. The natural environment is an integral part of the cul-

The Holy Skete of Timiou Prodromou





Mixed beech / fir forest on Mount Athos

tural heritage of Mount Athos, which should be protected with special care (images in pp. 129 and 130).

Historical data

Grisebach (1841) reports that Mount Athos was surrounded by thick old-growth forests with a great variety of species and vegetation. The same author states that the natural characteristics of the area were unique and could not be found elsewhere in Europe. However, after the Russian revolution of 1917, which was followed by the Greek rural reformation in the 1920s, the monasteries began exploiting their forests in order to make up for the revenues lost from expropriated properties and from donations from the Orthodox communities of Russia. As a result, the majority of the forests were turned into coppice.

Rauh, who visited the Holy Mountain in the 1940s, argued that the vegetation had maintained the abundance and

plenitude reported by Grisebach despite the conversion of many forests to coppice, and that it constituted an oasis in the Balkan Peninsula whose remaining forests were poor at best. Nevertheless, the available data are poor and it is possible that the transformation led to the loss of flora and fauna species which only live in old-growth forests.

Nowadays, the only high forests on Mount Athos are some beech (*Fagus sp.*) and mountainous Mediterranean conifer forests (Black pine), the forests of Aleppo pine in the Northern part of the peninsula and a few remains of the mixed forests in the forest of the Holy Monastery of Grigoriou and in remote locations of the forests of the monasteries of Simonopetra and Megisti Lavra.

The ecosystems of the broadleaved evergreen trees, which provided the monasteries with fuel wood, were also severely impacted as fuel wood and charcoal remain an almost exclusive source

of energy for many monasteries and sketes to this day. As a result, the mountain's evergreen deciduous formations show various levels of degradation around almost all of its monasteries.

Nature and monastic life

Orthodox monastic life is characterised by temperance, the careful use of natural resources and a sensitivity towards nature conservation. The ultimate criteria for the use of natural resources are symmetry between needs and use, and the preservation of spiritual peace. The limits of monastic life should serve the conservation of nature, and there are written rules dating back to the foundation of the monastic community of Mount Athos, which explicitly prohibit actions with the potential to alter the balance of nature.

Forest management is no exception. During the reign of the Byzantine emperor Ioannis Tzimiskis (AD 972), limitations were placed on the timber trade (Box 1), while later legislation specified that the forests could only be exploited to cover the needs of the monasteries.

Today, monks follow in the monastic tradition of 'order' and 'sustainability' and try to live in harmony with their environ-

mental surroundings, to manage the forests with respect, care and a love for nature, and to apply the traditional monastic knowledge in parallel with modern scientific methods and techniques.

Landscape conservation actions

Reducing the impact of the road network

In August (14-18) 1990, a devastating fire destroyed 2,230 ha of mainly chestnut and oak forests and threatened the Monastery of Simonopetra. The fire was able to spread so widely for two main reasons: the absence of forest roads and the density of the coppice forests (Kailidis 1990). After this tragic incident, the Monastic Community realised that further action was required for the sound management of Athos' forests and landscapes, and that:

- Coppice management should be re-evaluated.
- New road networks should be constructed for the protection of the monasteries and forests.

Many new roads were constructed as a result over the next few years. However, because the monks' fearful state of mind

Box 1

Ioannis Tsimiskis' Typikon [Rules of governance of the monastic community] of AD 972 imposed strict limits on the trade in forest products, while a second Typikon issued by Constantine VII Monomachos in AD 1045 states that trees may only be felled to provide for the needs of the monasteries.



Forest road constructed in the early Nineties visible from the sea

was not conducive to careful planning, this development left permanent scars on the Athonite landscape (image in p. 132). When the monks became aware of the problem, they decided to investigate methods for rehabilitating slopes along their forest road network, resulting in a Special Environmental Management Study conducted by the Greek Biotope / Wetland Centre (Dafis *et al.* 1999). The main two objectives of this Study were:

- To assess the impact of the construction of the road network on nearby natural landscapes; and
- To evaluate potential restoration measures.

The report concluded that for 11 of the 20 monasteries, the road density was higher than the 15m/ha limit considered appropriate for the environment. After almost ten years, it is clear that the Athonite road network has to be thoroughly studied as a whole. It is also clear that this study should consider the

closure of some roads and their return to a natural state. New roads should only be opened after adequate deliberation and a careful environmental assessment into the appropriate drainage works and restoration measures. Regarding the rehabilitation of the roads, the study of 1999 concluded that natural vegetation had successfully established itself on all low height (3-5m) slopes, but that intervention was necessary for, and restoration measures should be applied to, slopes higher than 5 metres.

Finally, it was suggested that mature trees should not be removed, even if they are in close proximity to the road network, whereas further reforestation plans (involving mainly local species) should be drawn up and implemented. Subsequently, all new roads (image in p. 133) have been implemented in line with these simple rules and the results are more than obvious, as can be seen from a comparison of images in pp. 132 and 133.



Newly-constructed road in which care has been taken to minimise the impact on the landscape

Ecological management of the forest of Simonopetra Monastery

The fire of 1990 adversely affected the lands of the Simonopetra Monastery, whose monks decided that the forest should be managed ecologically to produce wood to cover the monastery's needs and to render it better prepared in the event of another forest fire. Accordingly, the monks invited Professor Spyros Dafis and his team to produce a detailed inventory of the monastery's natural environment and to make proposals concerning the ecological management of their forest. In addition to these main objectives, the study also assessed the situation after the forest fire of 1990.

The study (Dafis 1993) covered an area of 1260 ha and identified 14 fundamental points relating to the ecological management of the monastery's forests, such as favouring mixed stands, increase the minimum diameter of logged trees, conserving aged trees, introduc-

ing ecologically-tolerable methods of transportation and setting some stands aside as nature reserves. With regard to the rehabilitation of burned areas, the study proposed felling all burned trees for aesthetic reasons, protecting the soil, increasing its organic matter and the forest's inversion to high forest. The study also proposed the stratification of the burned trunks along the contours of the slopes to help prevent soil erosion.

These recommendations respected the integrity of the site and were followed to the letter. Today, 17 year on, it is very difficult to find evidence of the fire since the vegetation has fully recovered, Castanea woods are now coppiced every 35-40 years, and 29 ha (which equates to 23% of the forested area of the Simonopetra Monastery) have been excluded from exploitation and set aside for nature conservation. More importantly, most of the other monasteries proposed their own environmental management plans in the wake of the Simonopetra Monastery's in-

initiative; the 14 principles originally presented to the Simonopetra Monastery are now widely accepted across the Holy Mountain.

Inversion of coppice Hungarian oak and Holm oak woods to high forest

The coppice oak forests have been recognised since the fire of 1990 as a threat which could assist the spread of forest fires. At the same time, several monks responsible for forest management realised that Hungarian oak (*Quercus frainetto*) could provide high-quality timber for constructions, that coppice management had altered the pristine landscape of Mount Athos, and that several species typical of high forests had become rare due to the alteration of their habitat. At the same time, the income from Holm oak (*Quercus ilex*) forests had fallen in significance.

In this context, the Holy Community of Mount Athos implemented the LIFE-Nature 'Rehabilitation of coppice *Quercus frainetto* and *Quercus ilex* woods to high forest' project. The main scope of this project was to initiate the rehabilitation of coppice Holm oak and Hungarian oak woods to high forest¹.

The method selected for the rehabilitation of both types of oak forests was that of selective inversion thinning, which over the three-year period of the project was successfully applied to an area of 500 ha (Kakouros and Dafis 2004). Other key objectives of the project included

the training of forest workers and supervisors, the establishing of a monitoring system consisting of 45 permanent test plots, and the publication (with contributions from associated Italian and Spanish networks) of *Guidelines for the Rehabilitation of Degraded Oak Forests* (Dafis and Kakouros 2006).

The main results of the project can be summarised as follows:

- Successful implementation of selective inversion thinning, especially in Holm oak, which will reduce the risk of wildfires and enhance diversity of species which prefer less dense forests.
- The setting up of a monitoring system allowing for a long-term ecological and economical assessment of the method; and
- The establishing of a demonstration area for the sustainable management of Holm oak and Hungarian oak forests in Greece and the Mediterranean in general.

One of the most important elements of the project was the close cooperation with the monks, the exchange of experience on forest management issues, and most importantly of all the integration of the spiritual aspects of nature management –the beliefs that the forest should be treated as a valuable and fragile gift from God; that forest management should take it into consideration that the forest should provide shelter for all God's creatures; and that wood and non-wood products of the forest should be extracted only to benefit the spiritual life of monks and pilgrims– into the planning and implementation of the project.

1 http://ec.europa.eu/environment/life/countries/documents/greece_en_nov06.pdf

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Buila-Vânturarița National Park

Valcea county, Romania

Sebastian Catanoiu

Introduction

In the Battle of Kalka (1223), a coalition of Slav princes and white Cumans (also known as Kipchaks or Polovetsy) was severely defeated by the Mongols under Subotai. Word of this battle and the imminence of a Mongolian invasion persuaded the black Cumans, who lived in what is now Romania outside the Carpathian Arch, to convert to Catholicism. Thus, in 1228 tens of thousands of Cumans were baptised by the Hungarian Archbishop of Strigonium. In 1241, when the Mongols invaded, some of the Cumans escaped to Transylvania, within the Carpathian Arch, but some of them were to later contribute to the establishment of the first Romanian mediaeval state of Wallachia (or Muntenia) c. 1290. The Cuman influence on this region was so strong that the earliest Wallachian rulers bore Cuman names. The ruling Cuman élite was gradually assimilated into the population they governed, becoming Romanian. The area in which Buila-Vânturarița National Park is located is renowned for the number of places still known by Cuman names (Djuvara, 1999), the two most famous of which are 'Cozia' (a copse of nut trees) and 'Hurezu' (an owl or night bird), because outstanding monasteries were built at both (Hurezu Convent, for instance, is a World Heritage Site). Our story can now begin...

Natural values

The Buila-Vânturarița National Park (BVNP) was established in 2004 as a category II protected area. According to the contract signed by the Romanian Ministry of the Environment and National Forestry Administration (Romsilva), the BVNP is to be administrated by Romsilva in cooperation with the Kogayon Association, which will undertake administrative issues. This cooperation is based on a collaboration protocol and is unique among the Parks administrated by the National Forestry Administration, because the Kogayon Association was heavily involved in the establishment of the Park. The Kogayon Association is an NGO established in 2004 by a group of students interested in nature conservation and sustainable development in the Buila Vânturarița massif; it now has over 120 members.

The National Forest Administration is a state-owned company with a long and distinguished history in forestry which administers a further 22 Romanian national and nature parks. It operates under the aegis of the Ministry of Agriculture and Rural Development, which has overall responsibility for forestry in Romania. The Ministry of the Environment and Sustainable Development is responsible for formulating environmental policy and strategies and administering Protected Areas in Romania. The National Agency for Protected Areas, which is supposed to administer the Protected Areas remains a 'paper organisation' (announced in 2006, it had only two employees in March 2009).

The BVNP is the smallest national park in Romania, covering just 4,320 ha in the Capatinii Mountains in the South Carpathians. The Buila-Vânturarița Massif covers the area between the western corner of the Bistrița Gorges and the Eastern corner of the Olănești Gorges, and rises up to a ridge 14 km long and 0.5 to 2.5 km wide. The Park takes its name from the two highest peaks along the ridge – Buila and Vânturarița – and varies in altitude from the Vânturarița Mare peak (1,885m) to the point at which the Bistrița River exits its gorges (550m).

All in all, four rivers run through the Park: the Olanesti and Cheia Rivers run through the massif from the North-east, the Costesti and the afore-mentioned Bistrița from the South-west (Asociatia Kogayon 2005). Running along a South-west to North-east axis, the Buila-Vânturarița limestone ridge – which, due to its altitude, its climatic conditions and bad weather, is known as the 'kingdom of lightning' – forms a barrier for the rivers that collect their water from the Southern slopes of the Căpățâni Mountains. The Cheia River forms a spectacular system of gorges, one of the deepest and wildest in the country, with 1 km of waterfalls, steps, bottoms as narrow as 2m and vertical walls as tall as 300m carved into the limestone between the Stogu and Vânturarița Mica Peaks.

While there are only a few small lakes, the underground waters have carved out over 100 caves: the most important spring (as a water source) is the Izvorul Frumos [Beautiful Spring] near the Pahomie Hermitage.

National Park, including 28 species of orchids as well as numerous endemic (e.g. *Centaurea pinnafida*, *Dianthus spiculifolius*), rare (e.g. *Taxus baccata*: yew tree, *Lilium jankae*: mountain lily, *Lilium martagon*: martagon lily and *Centaurea atropurpurea*: thistle) and several endangered (e.g. *Leontopodium alpinum*: edelweiss) species (Baciu 2007).

Carpathian fauna are also well represented, including (most representatively) the brown bear, the wolf, the lynx, the chamois and the red deer. As the Easternmost point of the Middle Carpathians, the Buila-Vânturarița Massif is also home to the cave micro fauna native to that range; its multiplicity attests to the massif's great biological significance. The bat colony which has resided in the Bat Cave (or the Saint Gregory of Decapoli Cave) for a considerable length of time (the cave bottom is covered in 1.7 metres of bat guano) is composed of 7 distinct species. Many of the species found in the Buila-Vânturarița National Park are protected by international conventions ratified by the Romania Government (i.e. the Convention of Bern, the Bonn Convention, the Convention of CITES, the Directives on Habitats and Birds). The Park is a Natura2000 site and has been designated both a Site of Community Interest (SCI) and a Special Protected Area (SPA), due to the mammal (14), bird (2) and plant (3) species of European significance to be found there. Scientific research in the area only began in the 1950s, and the Park's flora and fauna have still to be well documented and described (Asociația Kogayon 2005).

Monasteries and sketes aside, there are no permanent human settlements within the Park. Some sheepfolds are set up during the summer months, especially in the Southern part of the Park, which is close to the villages of Costesti, Pietreni and Barbatesti. The local people are informed about the Park, but the majority do not appreciate the importance of conserving its biodiversity, although they agree that the area's natural resources could form the foundation for prosperous sustainable development in the area.

Spiritual values

The area now covered by the BVNP – which is also known as 'the mountain of monks' – is famous for the six Orthodox monasteries and sketes that lie within it or on its fringes. These monastic settlements in the accessible part of the Park form a 'monastic belt' running across the Southern and South-eastern sides of the Park. The religious foundations can be considered the Park's spiritual guardians, because the main entrances and tourist trails start at or pass close by the monasteries and sketes. While it is not within the Park itself, the proximity of the Hurezi Convent means that its influence cannot be neglected.

The monasteries adhere to the Romanian Orthodox faith, which is part of Eastern Orthodoxy, the second largest Christian communion in the world. Holy Tradition (Sfanta Trăditie) is very important for the Romanian Orthodox Church because it represents the faith as Jesus taught it to the apostles and passed down uncorrupted to future generations. Witnesses to the

Holy Tradition are the Bible, the liturgy and iconography, the rulings of the Ecumenical councils and the writings of the Church Fathers. The only way to correctly understand the Bible is through the Church, as only the consensus of the Fathers can provide one with a profound understanding of the Bible and Christian doctrine.

There are two types of monastic communities in the BVNP: coenobitic communities such as Bistrița or Arnota, whose members live in monasteries under a common rule, and semi-eremitic communities like Pătrunsa or Pahomie whose members live in sketes.

Romanian churches are cruciform in shape and divided into three main parts: a pronaos (narthex), a naos (nave) and an altar (sanctuary). The nave and sanctuary are divided by an altar screen or iconostasis. There is usually a dome in the ceiling with an icon of Christ Pantocrator (Ruler of the Universe).

Bistrița Convent (80 nuns) is the most important of the Park's spiritual institutions. Built by the Craiovesti boyars in the 15th century, it has housed the relicts of Saint Gregory of Decapoli (Asia Minor, 780-842 AC) since 1492. The Convent has been destroyed many times, but assumed its present form in 1855 when a new church was constructed. The church is surrounded by a complex of buildings: a Royal Palace to its North and a belvedere to the East whose turrets were specially designed to afford spectacular views of the Bistrița Gorges and the Papusa sketes. The church is in the neo-gothic style with a Gothic iconostasis,

which is rather unusual for an Orthodox Church. Other sites in the vicinity include the Bolnita (Hospital) Church (1520: the only building to have survived from the first monasterial complex), the Saint Archanghels Skete (1633) and Ovidenia Church (14th century), the Bibescu Voda Bridge, two monumental crosses carved into the walls of the Bistrița gorges and the bishop's residence. There is an impressive fresco in Bolnita Church, the second oldest in Oltenia (an historic region of Muntenia): the oldest is in Cozia Monastery (1388) and displays influences of the Cretan school of iconography. The Saint Archanghels Skete and Ovidenia Church are situated in the Bat's Cave, which is also known as the cave of Saint Gregory of Decapoli. The bat colony which lives in the cave is guarded by the nuns, and access to the cave is only possible through Bistrița Convent with a nun as a guide).

Papusa Skete (1712) is a 15-minute walk from Bistrița Convent. A dependency of the Bistrița Convent, it was formerly used as a tranquil place for study by the scholar-monks of Bistrița. Built in the Brancovenian style (which is known as the Brancovenian baroque, reflecting the influence of the Western Renaissance), it also displays the influence of the Italo-Cretan school.

Arnota Convent (30 nuns) was built in 1633 by Matei Basarab (an important 17th-century ruler of Muntenia, the Romanian province between the Carpathians and the Danube). According to a local story, Matei Basarab was being pursued by a Turkish army but escaped by swapping clothes with one of his soldiers in a

swamp. Once crowned, he built a monastery on the site; he was later buried there, beside his father. The soldier was called “arnăuț” in Romanian, and that is how both the mountain and the monastery got their names. The monastery’s catholicon is a small, simple building with Brancovenian elements added in the 18th century. Although austere, this beautiful monastery is a representative historical and religious Romanian monument with typical painting, architecture and sculpture.

Skete of the 44 Springs (also known as ‘The Hermitage under the Stone’) was built by Abbot Steven of Bistrița Convent in 1701. It is a simple single-aisled church decorated on the outside by a few brick bands. However, the paintings of the skete are deteriorating because of cracks in the walls caused by explosions in a nearby limestone mine.

Pătrunsa Skete (30 monks) was built in 1740 by a bishop in memory of his mother, who fled the invading Turks into this area. She went into labour (“pătrunsă de durerile facerii” in Romanian) in one of the most isolated places in the country, known nowadays as Pătrunsa. Although the skete has been destroyed many times in the past, the current building — in the Brancovenian style with folk influences — dates back to the 19th century. A large new church was built nearby in 2006.

Pahomie skete (10 monks: also known as the ‘Pahomie Hermitage of the Beautiful Spring’) was built in 1520 by a Craiovesti boyar. The location of the church — beneath a large stone near a splendid waterfall — is outstanding, and an exam-

ple of the perfect integration of a monastic building into the landscape.

Hurezi Convent (70 nuns) was built by Constantin Brancoveanu 1690-1697 in a forested area whose charm was matched by its loneliness, and whose peace was disturbed by the calls of owls (‘hurez’ is a word of Cuman origin meaning owl). It was added to the World Heritage List in 1999 and declared an UNESCO monument. The convent is an important national monastic centre, and plays a role in preserving Romanian Orthodox culture and spirituality. The Holy Convent of Hurezi represents the largest collection of surviving mediaeval architecture in Muntenia, encompassing the convent itself, the infirmary church, and the sketes of John the Theologian (1698), Stephen the Archdeacon (1703) and the Holy Apostles Peter and Paul. The Convent of Hurezi and its sketes are considered the epitome of the Brancovenian style.

It has to be mentioned that the monasteries and sketes situated within or around the Park form just the fringes of an important monastic area centred on Hurezi Convent. Apart from the six monasteries and sketes and the Hurezi complex, the Park is also home to the Ursani Church (18th century), Ramesti Church (17th century), Peri Church (1689), Ciorobesti Church (1750), Gramesti Church (1664) — the second oldest wooden church in Oltenia —, Grusetu Church (1801), Romani Church, the Maldarasti Church of the Saint Steven Hermitage (1790), the Lezer Hermitage (14th century), the Bradu Hermitage (1784), the Saints Voivods Church (1722), Saracinesti Church and Monastery (1688), Jgheaburi Hermitage (1640), Frasiniei

Monastery (1860), Iernatic Church, Măleni Church, Vătăşeşti Church, Mierleşti Church and Poieni church (Bărbăteşti).

A monastery is a settlement where a religious community of monks or nuns lives. They dedicate their life to prayer, poverty, chastity and obedience. The leader of the monastery is the abbot supported by the monastic community, the spiritual council and the economical council. Every monastery has almost complete administrative autonomy; in our case, they are subordinate to the Bishopric of Ramnic, which is subordinate in turn to the Metropolitan Church of Oltenia, which was founded in 1370 and consists of only two dioceses: the Archbishopric of Craiova and the Bishopric of Ramnic.

Cultural values

The cultural values of the area are strongly related to the presence of the Orthodox monasteries. In medieval times, the Bistrița Convent was Muntenia's main cultural centre, and was thus compara-

ble with the Neamt Monastery in Moldova or Rila Monastery in Bulgaria. Muntenia's first printing press was housed here and printed the first book (*Macarie*, 1508) printed on Romanian territory. The first monastic document written in the Romanian language was printed here in 1573 by Eftimie, and other books of significance to Romanian culture were printed at the Bistrița Convent, including the *Cronica Universala* (1620) and *Pravila de la Govora* (1640).

The military school, which operated in the convent for a short time, was established by Marshal Averescu and generals Dragalina and Grigorescu, national heroes of World War One. Marshal Antonescu, the Romanian dictator during World War Two and a benefactor of the convent, was also imprisoned here for a short time. The Hurezi Convent owns a valuable collection of religious objects as well as an interesting library. During the reign of C. Brancoveanu, Prince of Wallachia (1688-1714), the convent functioned as an important cultural centre for Muntenia and the regions south of the

Traditional pottery with the 'Hurezu rooster'



Danube. There are many museums here, including the Horezu Ceramics Museum, the Potter's Workhouse in Olari, the Art Museum and Trovanti Museum in Costesti and the Popular Art Exhibition — Bărbătești. Horezu is the most famous pottery centre in Romania and its stylised rooster (the local potters use symbols that are of pagan as well as Christian origin [fish, trees, birds, snakes, etc.]) has come to symbolise the entire region.

The Ministry of Culture and Religious Affairs is responsible for protecting and conserving cultural, religious and historic sites of national importance. Though the Ministry does allocate funds to restoration programmes and schemes, they are usually inadequate. Local councils take care of local sites of importance, but given the inadequacy of the funds provided, monasteries and churches are usually left to use their own financial means. The ministries of Public Works on the one hand, and Agriculture and Rural Development on the other, are also involved in other projects in the area (roads, agriculture, etc.).

Pressures and impacts

Pressures

The main characteristics of the BVNP is its inaccessibility and the absence of human settlements within its boundaries. As a result, most human activity in the area is concentrated on the mountain's Eastern slopes. For hundreds of years, the livelihood of the local population —who are mostly engaged in wood harvesting and animal breeding— has been closely linked to the forest and the alpine meadows. Traditional lifestyles have been pre-

served in the area: horses, for example, are still used as a basic means of transportation and for working in the forests and fields. Traditional animal breeding methods, too (and sheep breeding, in particular), are also still in use in the area and while they may be relatively inefficient and have an adverse impact on the local economy in the form of low productivity, overgrazing etc., recent trends to replace transhumance with the permanent use of certain pasturelands and a shift to goat breeding pose a real threat to local biodiversity. Local traditions, customs and handicrafts remain closely linked to the locals' main occupations of shepherding, wood and stone craft, fruit-growing, apiculture, pottery, carpet weaving, weaving and the production of traditional fruit drinks. Since these activities have no adverse affect on the environment, there is no source of major conflict between the locals and the Park Authority objectives (Asociatia Kogayon 2006).

In the case of monasteries, the harsh living conditions in the forested areas necessarily led to a common and efficient use of pasturelands, hayfields and forest clearings. Each monastic community still engages in traditional activities such as cattle-raising, woodcraft, fruit production, mushroom and wild berry collection, apiculture, weaving, the making of traditional fruit drinks and fish-farming in ponds that have no significant negative impact on the environment. This model, characterised by sustainable consumption and production, does not produce a large volume of food and any surplus is sold in the monastic stores or is used as alms on Orthodox feast days.

This local husbandry is, however, expected to suffer dramatic changes due to the influx of goods from the EU which, produced by intensive agriculture and intensive animal breeding methods, are lower in price (even though the quality can often be lower).

The forest represents 89% of the Park's total area; the remaining 11% is made up of pasture land and hayfields. The Park's main landowners are the National Forest Administration (around 48%, corresponding to 2,074 ha) and private owners (around 52%, corresponding to 2,246 ha). The main private owners are the villages of Cheia, Barbatesti and Olanesti, which collectively own some 1,900 ha, the Municipality of Costesti (60 ha), Arnota Monastery (210 ha), Pietreni and Costesti churches and a few private individuals. Although major owners such as the National Forest Administration and village collectives are oriented towards a sustainable use of resources, small owners tend to be orientated towards extensive use. Although the forest area owned by the Romanian Orthodox Church is currently limited, important areas have been claimed (50 ha by Bistrița Convent, another 250 ha by Arnota Monastery) so the Romanian Orthodox Church could well become an important landowner in the Park area.

During the communist era, the lime pit between Bistrița and Arnota Monasteries was exploited as an open quarry which employed a noisy belt conveyer. Access to Arnota Monastery is only possible through the lime pit, which is anything but in harmony with the monastery's spiritual tranquillity and remarkable views.

The significant increase in construction has translated into increasing demand for raw material such as wood and cement, and the exploitation of timber and lime in the area is expected to increase.

The BVNP can be seen as a transition belt between the monastic area centred on Hurezi Convent and the wild area represented by the Capatinii Mountains. The medieval monasteries and the Horezu pottery centre are the main attractions in the BVNP area, and visitors are usually attracted by the area's cultural heritage; also, while just a small proportion of the annual visitors can be considered pilgrims, during the main feast days of the Orthodox year and the monasteries' *Hram* [Saints' days] the tourism is exclusively religious. To a lesser extent, the tourists are also attracted by the natural scenery of the outstanding Bistrița, Costesti, Cheia and Olanesti gorges, which are accessible by car. The gorges and the great number of caves are of great interest for climbers, cavers, etc. Furthermore, there are two spas famous for their curative waters in the Baile Olanesti and Govora areas respectively. As far as tourism is concerned, the BVNP is the 'end of the road' for visitors to the area. There are many tourist trails and it is only a matter of time before the facilities required for mass tourism are constructed in the Park. A number of pensions and traditional farms have been built recently, while the Church has also developed or modernised its various facilities in order to host a greater numbers of guests.

At the community level, the Park's educational and awareness-raising initiatives continue to have a positive impact

on promoting the area's image and values, paving the way for increased revenues from recreational tourism and local attractions.

Impact on the natural environment

The animal husbandry economy of the region is oriented towards self-sufficiency; no significant over-production is recorded, so these traditional activities have a low impact on the environment. However, lime exploitation and wood harvesting is expected to increase in intensity in the years to come; an area of 16 ha inside the Park was approved for the future exploitation of the lime pit before the Park was established, so the activity will be continuing in the Park (Asociația Kogayon 2005).

Tourists are especially interested in the monasteries. The presence of the Horezu pottery centre and the famous monasteries of Bistrița and Arnota with their sketes are the Park's main tourist attractions. The Park Administration and Kogayon Association promote and advertise the spiritual and cultural values of the Park, which has led to increased visitor numbers. An ecotourism trail called 'The gates of BVNP: Nature and Spirituality' is accessible to all visitors, with all the necessary information provided by information panels and tourist indicators. There are 18 tourist trails beginning in, or intersecting, the Park. These trails are short (4-5 hours) since the Park is small (14 km long, 0.5-2.5 km wide) and all start, end or pass close by a monastery or skete.

Buila-Vânturarița is a paradise for climbers. There are 5 climbing areas and more

than 100 organised climbing trails. Since some of the waterfalls freeze during the winter, the Park can also offer ice climbing. Extreme skiing and flying with delta wings are also possible, though neither are particularly popular as yet. Mountain bikers appreciate the forest roads within the Park. The Park also boasts over one hundred caves and a number of astonishing gorges among its attractions, and some – especially the gorges and caves in the vicinity of monasteries – are easily accessed by tourists.

Camping areas, mountain refuges, shelters, water reserves, rubbish collection facilities, information panels, towers for bird / animal watching are some of the facilities that need to be established at appropriate points in the Park. While such facilities would assure good conditions for the tourists, they would also allow for an increase in visitor numbers. The growing number of pensions, hotels and traditional farms in the neighbouring area will increase the average length of stay in the area, which will give tourists an opportunity to visit the Park's natural attractions as well as its monasteries.

If the Park's visiting rules are not respected, biodiversity could suffer due to environmental pollution caused by the waste, barbeque pits, and noise related to mass tourism. Conflicts may then arise between tourists and the traditional users / owners of the forests, hayfields and pasture land.

The main activity with a negative impact on the environment is lime exploitation. During the 40 years in which the local lime pit has been in commercial use, the region has produced large quantities of



Interior of Bistrita Convent

limestone and attracted large investments to ensure its efficient operation. Lime production also provides work both in the immediate vicinity and in the local cement factory. However, the lime pit does impinge on the natural environment. The dust and the noise produced by the pit, the lime mill and the conveyor belt have a significant negative impact on the neighbouring area. For their part, the quarry's administrators consider lime exploitation a 'traditional activity' and thus not out of keeping with the Park.

In the pursuit of greater efficiency, the traditional methods of wood harvesting using horses, oxen and carts to collect and transport small logs, which have a low impact on the environment, are now giving way to modern methods utilising modern tractors and trucks. This requires an improved infrastructure, especially since larger quantities of wood are harvested in the same period of time. This poses particular difficulties because the BVNP's network of forest roads is not

well developed. Activities such as logging on steep slopes and collecting and transporting logs on river banks pose further risks to biodiversity. The different types of ownership (state, community, individual, monastic) make illegal logging possible, while ambiguities in ownership status (areas that have been claimed but not restituted; areas whose ownership is being legally disputed) can in some cases encourage violations of the forestry regulations and result in irrational and illegal timber exploitation.

Impact on the spiritual and cultural aspects of the site

The site's main spiritual values are related to the Christian Orthodox faith and its institutions, whose regimes vary from extremely strict in the isolated Arnota Monastery to more lax in Bistrița Monastery, which is situated close to the main road and visited by more tourists. Mass tourism represents a double-edged sword for monastic life, since the new facilities

are not in keeping with the spiritual and cultural values of the area. In Arnota's case, for instance, the new buildings (which resemble those of the Bistrița complex) clash with the Brancovenian style of the old church, while in Pătrunsa, the new church, built in 2006, dwarfs the old historic one.

That the lime quarry is positioned between the monasteries of Bistrița and Arnota is nothing short of a disaster. The Eastern aspect of Bistrița Convent, which was designed to emphasise the surrounding landscape, now affords a 'splendid' view of the lime pit, while the dust and noise affect both monasteries. One can only travel from Bistrița to Arnota through the quarry along a route resembling the road from heaven to hell, due to the enormous contrast between the tranquil spirituality of the monasteries and the bare earth, noise and dust of the lime pit. The monasteries and the areas around them are models of cleanliness and good management, and could play an important role in environmental education in the years to come.

Conservation perspectives and sustainability

Trends in the conservation of the natural heritage of the site

The BVNP Administration and Kogayon Association are responsible for conserving the natural values of the area, and various projects have been implemented in the Park area through Kogayon. After EU enlargement in 2007 and the granting of Natura2000 status to the Park, it has been possible to obtain EU structural funds for

the environment. It is assumed that, given a dedicated management team, the level of funds attracted by the BVNP will increase in the years to come. Public interest is focused on only the most spectacular and well-known elements of Romania's natural heritage, such as the big carnivores, caves, gorges and animals considered important by the Habitats Directive. These sites have to be mapped, and specific management measures must be applied.

Governmental Decree 57/2007 introduced a new classification for zoning inside Romanian national parks. The strictly-protected areas thus introduced — which account for 44% of the BVNP's total area — are off-limits to all human intervention except for research, education and ecotourism. In 74% of the buffer zone (which represents the remaining 56% of the Park), only the special conservation harvesting of small quantities of wood is allowed. In conclusion, normal logging is permitted on only 619 ha, which represents just 16% of the Park's total forested area. In areas where logging is forbidden or restricted, the dysfunctionality of the compensation mechanism has left private owners discontented with the restrictions and the impossibility of obtaining a revenue from their woodland. As a result, the main forest owners (the representatives of village collectives and the small owners, in particular) are strongly contesting this legal provision in the courts. Since no compensation is available for continuing to not fell trees in the core zone, the representatives of the Barbatesti collective tried to obtain an injunction shifting the boundaries of the Park so that Barbatesti's collective property was outside the BVNP.

Fortunately, the Supreme Court's ruling in 2009 emphasised the privileging of nature conservation measures over property rights, but the compensation problem remains unsolved. Future legislation is expected to ensure better protection which accords with the expectations of the National Agency for Protected Areas. In any case, the precariousness of the law represents a major obstacle to uniting all the stakeholders in the area in support of protecting its natural heritage.

Trends in the protection of cultural and spiritual heritage

After fifty years of Communism, when the Romanian Orthodox Church was repressed and thousands of monks and nuns expelled and monasteries closed, the Orthodox Church is now entering a real growth period after an economically perilous period of transition lasting almost two decades. For example, in one year alone (1998), 145 churches were built in Romania with a further 731 under construction. The Romanian Orthodox Church is arguably the second largest Orthodox flock numerically (with 19 million Rumanian Orthodox in Romania and a further 0.7 million in Moldavian Republic) after the Russian Orthodox Church. New churches are being built everywhere, along with new monasteries, hermitages, shrines etc. (some even inside some protected areas), while the number of clergy is also growing. Coupled with the possibility of more EU funding, the prospects for the protection of the nation's cultural and spiritual heritage is promising. The Orthodox Church is officially involved in cultural and social pro-

jects, and it is only a matter of time before this involvement is extended to environmental issues, given the Church's desire to tackle real challenges. Nowadays, the Church is the most credible institution in the Romanian state, and its influence is expected to remain at least at the same level in the future. The Kogayon Association has already developed a project entitled 'The gates of BVNP: Nature and Spirituality' in order to emphasise the association between cultural and spiritual heritage in the case of the BVNP.

Several traditional events have also been staged to help preserve cultural heritage and traditional knowledge in the area, including the 'Reel of Costumes', a celebration of popular costumes and music; 'Golden Honeycomb', a day dedicated to apiculture; the 'Rooster of Hurez', a pottery trade fair; 'Învârtita Dorului', a day of celebration for and of shepherds; 'Strawberry Day' and the International Roma Festival. These events are expected to be instituted as annual events and to be joined by several new ones.

Recommendations

The BVNP is a place where nature and spiritually interact in a specific way. The role of 'the mountain of monks' with its coenobitic and semi-eremitic communities living inside or close to a truly wild area should be recognised (especially given the presence of a World Heritage Site — Hurezi Convent — nearby) as promoting a spiritual attitude towards nature and environmental protection at a national and international level.

The management plan proposal for the BVNP has been approved by the Consultative Council (which represents the stakeholders) and the Scientific Council (the representatives of the scientific community). However, the law requires that the management plan be endorsed by the Environmental Ministry. Regarding the spiritual / cultural aspects of the site and its natural heritage, both councils agreed that the Park's main objective is 'the conservation of biological, geological and cultural diversity for sustainable development in the area'. The internal zoning includes three areas specifically dedicated to developing the monastic communities (Arnota, Pătrunsa, Pahomie). An evaluation of the proposal's impact in terms of conserving cultural diversity has been conducted, and an action plan drawn up.

The natural heritage of the BVNP has been extensively studied, but its cultural and spiritual heritage has not been as rigorously investigated; further and more focused research is required to identify and fill in gaps in our current knowledge. Detailed studies of the importance of spiritual and cultural values have also to be conducted by stakeholder groups. Moreover, religious activities and related tourist activities, as well as other activities permissible in the monastic areas, must be defined in the final version of the management plan.

Education is one of the most effective tools for developing an integrated approach to the conservation of the area's natural, spiritual, and cultural heritage.

Raise people's awareness and they will be far more willing to follow rules and respect beliefs and practices. For this reason, public awareness and education programmes must be implemented, which will focus jointly on the environmental and the religious, in order to emphasise the region's wonderful mixture of natural and spiritual features (information centres relating to both the park and the monasteries; educating young people to appreciate the purity, beauty and sanctity of the site). A cultural interchange is required between the monastic population, local people and visitors with regard to spiritual / cultural aspects and natural heritage values if the site is to be seen as combining the spiritual / cultural and natural heritage.

Efforts to protect the environment and encourage more sustainable development need to show that conserving the cultural, spiritual and natural heritage of the site can enrich people's lives. The management plan has to emphasise the necessity of a viable mechanism for compensating the owners of strictly protected areas where logging is forbidden or limited. Certification is necessary for the forest and the wood-processing industry, but also for agriculture (organic farming), tourism, etc. The use of locally-adapted crops and livestock must be encouraged, and brands for local products and services must be officially recognised and promoted. Measures to reduce the impact of the lime pit (permanent monitoring, reforestation of exploited areas within the quarry, etc.) have also to be taken.

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Hurezi Convent, main entrance





An integrated ecological approach to monastic land: the case of the Holy Convent of Chrysopigi

Chania, Crete, Greece

Mother Superior Theoxeni

Introduction - The history of the Holy Monastery of Chrysopigi

The Holy Monastery of Chrysopigi was founded in Chania towards the end of the 16th century, during the last period of Venetian rule. It is dedicated to the Mother of God, the Life-Giving Spring.

Its founder was a Doctor of Medicine and of Philosophy from Chania, educated in Italy, known as John Chartophylax, who was an important personality of his time and an active member of the local community.

During the latter period of Venetian rule, Chrysopigi became a spiritual centre for Crete with many monks and a rich library.

During the period of Turkish rule the spiritual tradition of the monastery continued and the monastery became a Stavro-

pegic Monastery¹. The monks participated in the historic struggles of the people of the area, and in consequence the monastery itself suffered frequent retribution at the hands of the Turks who torched the monastery for the last time in 1821 at the time of the Greek revolution.

During the Second World War the occupying German forces converted the monastery into their headquarters, forcing the monks to leave and causing great damage to the architectural structure of the buildings –except for the church. A period of decline followed.

In 1976 Chrysopigi Monastery was converted into a Convent. The new communi-

¹ Stavropegic (and Patriarchal) is a monastery which is directly dependent on the Ecumenical Patriarchate in Constantinople.

ty of the first three nuns restored the monastery buildings from their foundations and sought to give them new life. The first abbess, Mother Theosemni (†2000), was the new founder of Chrysopigi Monastery.

Today the Convent comprises a community of 40 sisters. The sisters are involved in icon-painting, the preservation of old books and icons, the publication of books, bookbinding, church embroidery, the cultivation of land with organic methods etc.

The monastery is visited by many pilgrims from Greece and abroad, many of whom are young people who are rediscovering the life of worship and the tradition of the Orthodox Church.

Natural values

Chrysopigi consists of two large monastic areas. The one includes approximately 10 ha and is situated only 3.5 kilometres from the city centre. This land comprises mainly olive and mandarin trees, along with orange, avocado, fig, apricot and carob trees, as well as vegetable gardens. The convent has succeeded in having this area designated as a green belt area (protection zone A). In this way any danger of urban development on the sacred area which surrounds the monastery is prevented. The land around the monastery buildings has been preserved and is a source of life for the city of Chania. In 1995 the Monastery received the 1st 'Habitat' prize as the "best model for the restorative and environmental regeneration in the wider area"².

² The prize was awarded by the UN Conference 'HABITAT II', 1995.

The second area of monastic land comprises approximately 30 ha and is situated outwith the city of Chania. This location is an old monastic dependency of the Monastery of Chrysopigi and the sisterhood now lives there in the monastic buildings and sketes. It is situated in an area of great natural beauty and operates as an open museum for pilgrims and visitors. It comprises woodland and a small gorge, through which a torrent runs during the winter months. The area contains many caves, some of which are chapels, with stone footpaths to guide the pilgrims.

This monastic land represents a very important part of the natural map of Crete. According to the "Rio Declaration on Environment and Development"³ the ecosystem of Crete is one of the most sensitive and fragile in the world. This specific biotope has a very significant biodiversity, which has been the object of scientific research. Many of the plants indigenous to the area are valuable for the treatment of illnesses. They have been known to conventional medicine for centuries and are used even in our day in pharmaceuticals. Apart from the plants, some of which are rare, there are all the trees characteristic of Cretan flora: the olive, carob, platanus, cypress, myrtle, oleander, caparis, cistus creticus, thyme etc.

Spiritual and cultural values

Apart from its environmental value, the monastic area of the caves also possesses an archaeological and historical value. It includes the Church of St. Kyriaki, a monu-

³ See Agenda 21, ch. 18, *United Nations Conference on Environment and Development*, Rio de Janeiro 1992.



Ascetic hermitages in the cave area

ment from the Venetian period, which serves as the starting point for the pilgrim's itinerary. Here the pilgrim or nature lover will leave his car to continue on foot following the stone paths to the various hermitages and chapels constructed in the caves. There is also a path that leads higher up to the ruins of a Byzantine fortress.

This area was inhabited up until the first decades of the previous century, but was destroyed by the Germans during the Second World War. The monastery then became desolate, because the buildings were turned into stockyards and the natural environment was altered by an uncontrolled grazing of flocks.

Elder Porphyrios, a contemporary saint of the Christian Orthodox Church (†1991 on Mount Athos), who had an exceptional love for nature, a few years before his death urged the sisterhood of Chrysopigi to work towards the regeneration of this abandoned monastic area, which is the property of the monastery, assuring the nuns that by the grace of God he discerned that the area was holy and that

when it would be regenerated and would become accessible to people it would function as a place of reconciliation with nature. Elder Porphyrios referred to nature as a 'secret Gospel' and used to say that 'all things around us are droplets of the love of God'⁴. "*Droplets of the Love of God*" is the title of a children's book recently published by the Convent and which has been translated into German, English and Korean. With the blessing and encouragement of the holy Elder Porphyrios the sisterhood regenerated the area of the caves. This area was inhabited by ascetics for many centuries and thus it was sanctified through their prayer and worship. Important ascetic figures lived here, either permanently or periodically. One of best-known is St. Gerasimos of Kefallonia who lived for about three years in a cave of this area. The presence of holy ascetics on the land contributed to the sanctification of the elements of the natural environment such as

⁴ See *Wounded by love: the life and wisdom of Elder Porphyrios*, 2005, Limni-Evia, p. 218.



Walking on the stone paths

the springs, to which people even to this day flock in search of cures for illnesses.

The conservation of the area's biodiversity is therefore not only a matter of survival, but a spiritual issue. For this reason since 1997 environmental education programmes have been organised by sisters of the community who have specialized in this subject. These programmes are designed for school and university students, camp leaders, young women, monastic communities etc. During the last three years secondary school pupils from throughout Greece have participated in the programme in the context of educational excursions in cooperation with the Environmental Education Department of the local Secondary Education Authority. Young people are invited to participate in specific experimental programmes, and specifically in conferences and meetings, which take place in the restored monastery. The programmes, in addition to the theoretical aspect, include:

- The planting of trees and the releasing of birds in the monastic biotope

- Participation in services of worship in the cave chapels
- A pilgrimage to the caves and hermitages of the monastery with a walk on the stone paths and steps
- Exploration of the biodiversity of the flora, the springs and the holy water sources
- Walking to the rain water tank and the monastery wine-press
- A walk around the monastic buildings that are being restored
- A visit to the hand-made soap workshop and the beehives with organic honey

In addition, students are able to have computer access to information concerning the sacredness of creation and the management of the environment, in a restored building outside the main monastery next to an old cistern.

The Monastery's environmental programme aims to raise awareness and educate the young people who participate in it

(approximately 1500 per year), in order to realise the importance of the conservation of creation. The close connection between the Orthodox tradition and the protection of the environment is fully perceived and is well accepted by the students, as their ever increasing participation in the programme demonstrates.

What emerges from these experiences is the vision of a life of thanksgiving: Just as in the Divine Liturgy the bread and wine are transformed and offered back to God, so the whole of creation can be seen as something to be sanctified and offered to God and indeed the inner being of each individual may equally be transfigured and returned to God in a mystery of thanksgiving.

In accordance with the spirit of the Orthodox Church the aim of a true monastic is to seek sanctity through the transfiguring path of asceticism, prayer and repentance. He lives in a self sufficient manner, in obedience to the Church, free from any personal wishes; for that reason he lives in peace, without anxiety or stress. He understands the anguish of the world, not with despair but with love and prayer. Thus his life becomes a witness to sustainability and an example of anti-consumerism and leavens the world with a new cast of mind, which is permanent, deep and definite.

Conservation perspectives and sustainability

The sisterhood of Chrysopigi has restored the complex of buildings and preserved the artifacts of the Monastery through the creation of an ecclesiastical and folk museum.

One of the main activities of the Convent is the cultivation of its land with organic farming methods, which is in accordance with the Ecumenical Patriarchate's call (01/09/1989) for the protection of the Environment⁵. From that time the Monastery of Chrysopigi has closely followed the initiatives of the Ecumenical Patriarchate.

On the monastery land, chemical fertilizers have been replaced with compost produced from organic matter, i.e. leaves from the trees, manure from free-grazing animals, grass, sawdust and raw wood, quick-lime, fruit and vegetable scraps etc. Vetch is sown for the general enrichment of the soil. When the vetch is in flower, it is ploughed into the land thereby releasing organic nitrogen into the soil.

Harmful insects affecting the trees and the vegetable gardens are also dealt with by using organic methods. That is, with the use of special traps which capture the dangerous insects while leaving the beneficial ones unharmed. Diseases in the vegetable gardens are dealt with by planting basil and dwarf marigold flowers among the plants. Because of their strong odour, they are excellent insect-repellents. The plants are also sprinkled with sulphur for the same reason.

Since the olive oil, the mandarins and the avocados are produced in larger quantities, they are marketed with appropriate packaging and labelling, which informs and educates the consumer about the programme of organic cultivation and its exceptional importance for health of mind and body.

5 Ecumenical Patriarch Demetrios, "Encyclical letter, September 1, 1989", in Fr. John Chryssavgis (ed.), *Cosmic grace – Humble prayer*, Michigan / Cambridge, 2003, pp. 379.

Many efforts are made by the monastic community of Chrysopigi to ensure the protection of the monastic area of the caves. Hunting is prohibited in the biotope and consequently many species of birds find a refuge there, while the exclusion of grazing animals has helped in the revival of the flora. At the same time, due to the organic agriculture, the area has been chosen on a number of occasions as a point for bird release by bird protection organisations.

In regarding to the areas with buildings, along with the restoration of the historical monuments, new stone buildings are under construction on a rocky prominence in the area in total harmony with the natural surroundings. In the new of monastic buildings of Transfiguration, programmes to implement alternative forms of energy (such as solar heating and photovoltaic) are being studied and put into practice, while at the same time plans for water management are being carried out. In addition, trees are being planted with the prospect of being watered by the outflow from biological cleansing installations. The aim of this environmental programme is to serve as a model for other monasteries on Crete –and indeed throughout Greece– and also as a model for farms in the surrounding villages and on the whole island of Crete.

In addition, the preservation of sanctity of the world is sought through the art of Orthodox iconography. The painting of the icons of the Orthodox Church of Saint Andrew in the city of Dósseldorf in Germany by the sisters of the monastery which was completed in 2002, constitutes a characteristic sample of orthodox iconography, which combines the tradi-

tional synthesis of hagiological subjects with the theological interpretation of social, ecological and eschatological concerns of contemporary man.

In accordance with this spirit, subjects such as the creation of the world as it was created by God as 'very good' are depicted. All the mysteries which sanctify and bless the path of human life as well as material things, portrayals of Saints who, with the grace of God obtained a Paradise-like relationship with the natural world, as for example, Saint Seraphim of Sarov, who fed a wild bear with his own hands or Saint John the Hermit of Crete who walked on the sea (from Gavdos to Crete) and many others.

Pressures and impacts - recommendations

It is true that the world-wide ecological crisis, which often turns into ecological disaster, is frequently irreversible and that man feels impotent in face of this painful reality. As Christians, however, our criterion and ultimate destination is the future Kingdom. We are called to experience it every day as a foretaste of eternity. For this reason we do not quail before the hopeless prognostications of the scientists concerning the future of the planet, since we have the certainty that here 'we have no enduring city, but look for the city that is to come'⁶.

In accordance with this spirit, an arduous daily struggle is made by the sisterhood of Chrysopigi for the preservation of the holy monastic setting with its rich biodiversity and rare flora and fauna. The

6 *Heb.* 13. 14.



The ascent to Transfiguration

problems are many. Today the children of the shepherds that live in the surrounding area do not have animals but dream of how they might exploit commercially the pastureland which has been given to them and which constitutes the continuation of the area of the caves. According to the new law governing archaeological sites, the caves and their immediate environs constitute a protected area. However, for the land beyond the caves which have been given to the shepherds as pastureland, a legal framework for environmental protection must be found. For if this wider area is not preserved environmentally, the environment around the monastery, the springs, the trees, the organic cultivation, the rare flora of the ravine, the animals and the birds and indeed the monuments themselves, along with the historical and cultural heritage and tradition will all be endangered.

We believe that when we work conscientiously with the conviction that God has providential care for the world we preserve our self-consciousness as Chris-

tians: a monastery in its location, a priest in his parish, a bishop in his diocese, a layperson in his family or workplace, a Government Minister in his position of responsibility, a child in his class at school.

In this way, each individual, doing the will of God with consistency and responsibility in his or her everyday activities, can become aware of the sacredness of the world and make his or her attendance at church an effective force. Our path on earth thus becomes a witness to hope and joy; the things of this world cease to be ephemeral and subject to corruption and are transfigured into things immortal and eternal. The quintessence is the love which the saints of our Church live and teach. Love for all things, even for the basest and most insignificant things of this world, which, however, carry within them the breath of God. Because as the poet Odysseus Elytis writes: '*The earth needs a caress and a whisper like that of the rider in his horse's ear*'⁷.

7 Odysseus Elytis, *The Light-Tree and 14th Beauty*, Athens 1999.



Initiatives taken by the Cistercian Monastery of Poblet to improve the integration of spiritual, cultural and environmental values

Catalonia, Spain

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Lluc M. Torcal

Purpose

By means of a description of some of the actions already undertaken and some of the proposals suggested for the coming years, this paper discusses the main initiatives aimed at improving the integration of spiritual, cultural and natural values in the activities of the Monastery of Poblet in Catalonia, Spain. The process began during the first Delos Initiative workshop, which was held in Montserrat in 2006, and has continued to evolve during the preparation of the Delos Initiative case-study.

Background

The Monastery of Santa Maria de Poblet is located in southern Catalonia, Spain, so-

me 130 km west of Barcelona in a mid-altitude Mediterranean landscape (image in p. 162). Founded in the 12th century, this impressive monastic citadel complex is an outstanding example of mediaeval Cistercian architecture. The Monastery was active for 7 centuries, and had enormous spiritual, cultural and political influence throughout most of its history; indeed, in its heyday, Poblet was one of the most important Cistercian monasteries in Europe.

The Cistercian Order is a branch of the Benedictine family of Latin Christian monastic orders. Established in the 12th century, it was well known in Western Europe during the Middle Ages for *inter alia* promoting advanced sustainable techniques in agriculture, forestry and animal husbandry, and, in particular, for its work



Summer view of the Monastery of Santa Maria de Poblet and surrounding landscape

in reclaiming wasteland. It was also renowned for its plain ascetic life-style, and the simple but extremely beautiful architecture of its buildings. Although there were some precedents in Europe, its farm-based organisation is a distinctive feature of early Cistercian agriculture (Lekai 1987).

The place name 'Poblet' is a Catalan derivation of the Latin *populetus*, which refers to the riparian white poplar (*Populus alba*) forest that grows along a nearby stream. Since this tree has white bark, there may also be a symbolic relationship with the white habits of the Cistercians, who are also known as 'white monks'.

As a result of donations, the Monastic community came to own and / or manage vast areas of land with distinct ecosystems in the Eastern Iberian Peninsula, ranging from alpine meadows in the Pyrenees, where sheep flocks spent the summer, to productive croplands and forests in central Catalonia and the lagoons on the Mediterranean coast that provided the monks with fish during peri-

ods of fasting. The basic productive and organisational unit was the Cistercian farm where a small number of lay brothers worked and followed a life-style similar to that of the fathers — i.e. the monks who devoted themselves, above all, to prayer and contemplation.

Monastic life at Poblet ended in 1835, when Spain's 'liberal' government suppressed all the country's monastic orders for a second time and the Monastery was abandoned. The Spanish Government took over all Church properties and in the years that followed the forests of Poblet, which had been managed in a sustainable manner for centuries, were overexploited. In just a few decades, this extraordinary forest had been razed to the ground by people from nearby villages, while the old monastery and its facilities were completely devastated (Altisent 1974).

Fortunately, this lack of control lasted only a few decades. Mindful of its outstanding cultural value, various government bodies slowly began to restore the



Gothic cloister and bell tower

Monastery's buildings in the mid 19th century. By 1871, most of Poblet's forests had become state property: the forestry department implemented a very successful restoration process and the Monastery had regained much of its former splendour a century later (Martínez 2001).

In 1940, a group of four Cistercian monks returned to Poblet and revived the monastic community: the community grew slowly, and there are currently some 30 monks under an Abbot living in the Monastery. A brotherhood of the Monastery — whose numbers will soon reach 400 — has also been established, and the key elements of this great medieval monastery are again being put to the very uses they were built for six or seven centuries ago.

Like most other historic monasteries in Spain, Poblet is currently the property of the Spanish government. The monks are allowed to use the buildings and are charged with its maintenance, but the community owns just 6 ha of gardens and vineyards in the vicinity of the monastery, plus

a further 25 ha of forestland within walking distance of the Monastery. The old Cistercian farm, used by groups of monks at certain times of the year, is almost entirely powered by solar energy, while water is pumped from a nearby mountain stream.

Spiritual, cultural and natural values of the Monastery and the Park

The Monastery of Santa Maria de Poblet is a unique artistic achievement and one of the most perfect expressions of 12th-, 13th- and 14th-century Cistercian architecture (image in p. 163). The abbey contains architectural masterpieces from many historical periods, although its Romanesque and Gothic elements are of particular note (image in p. 167). Poblet, one of the largest and most complete of all Cistercian abbeys, also served over the centuries as a royal palace and residence. It is a Royal Monastery, since it was chosen by the kings of the ancient House of Aragon as home to their pantheon during the 13th and 14th centuries.

The important archives of Montserrat Tarradellas i Macià and the Casa Ducal de Medinaceli are kept in the former Abbot's Palace, which was built outside the Monastery's perimeter walls during the 17th and 18th centuries. In addition, the Monastery's museums offer a virtual tour of the Monastery's past and explain how the Monastery operates today. These museums also boast a large number of recovered exhibits and bequests of great historical and artistic value. The Monastery archives, which encompass almost eight centuries of its history, are still almost intact, although most of the original documents are now kept in the National Archive in Madrid. They include extremely interesting documents relating to every aspect of community life and details on how the Cistercian monks managed their natural resources.

Poblet Monastery currently receives over 150,000 visitors per year (image in p. 168), the majority of whom are attracted by its cultural heritage. And while only a small minority are drawn by its spiritual life, the number of people willing to go on retreats in the Monastery is growing. As a result, a new and larger guest house is currently under construction outside the walls which will supplement the limited capacity of the two male guest houses within the walls with accommodation for another 50 families.

The main natural values of the Park are linked to the surrounding Mediterranean forests, which include 2 types of evergreen oak forest communities, 3 different deciduous oak forest communities and one pine forest community. The dominant tree species are Holm or evergreen oak (*Quercus ilex*), various deciduous oaks — Lusitanian oak (*Quercus faginea*), (*Q.x.*

cerrioides), Algerian oak (*Q. canariensis*), sessile oak (*Q. petraea*), Pyrenean oak (*Q. pyrenaica*)— and accompanying trees such as the smooth-leaved elm (*Ulmus minor*), black poplar (*Populus nigra*), aspen (*Populus tremula*), large-leaved lime (*Tilia platyphyllos*), holly (*Ilex aquifolium*), common yew (*Taxus baccata*), hazel (*Corylus avellana*) and the true service tree (*Sorbus domestica*). Over 35 rare plant species are found in the forests of Poblet, including a number of Iberian endemics, while the forest fauna is quite diverse, the largest mammals being the Roe Deer (*Capreolus capreolus*), Wild Boar (*Sus scrofa*) and Badger (*Meles meles*).

Natural and cultural heritage conservation and education efforts

Following suggestions from the former Abbot of Poblet, Father Maur Esteva¹, the Catalan Parliament passed a law in 1984 declaring the landscape around the Monastery (c.2500 ha) to be a Natural Site of National Importance². This protected area (henceforth: the Park) includes the most valuable forests as well as some vineyards in the lower-lying areas around the Monastery. Four years later, a Decree established two managed forest nature reserves covering some 900 ha, one of which includes the only Pyrenean oak forest in Catalonia³.

1 Father M. Esteva is now the General Abbot of the entire Cistercian Order.

2 Law 22/1984. A Paratge Natural d'Interès Nacional (PNIN) is a type of protected area created by Catalan law 12/1985 in natural areas. Current management practices correspond either to IUCN categories IV or V, depending on the zone.

3 Decree 279/1998 established the managed nature reserves of Barranc del Tilar and Barranc de la Trinitat.



Partial map of the proposed larger protected area including the Monastery

Although 70% of the Park area is publicly owned (a situation rare in Catalonia), active management did not begin until 1999. Since then, the protected area has been looked after by a small management team of four people plus four rangers; its 2007 budget was €772,000. The Park Board first met in 2001 and includes representatives from the Catalan government, the two local municipalities, local NGOs and the Monastery itself. The guiding service is used by around one thousand people a year⁴.

In 1991, at the behest of the Spanish government, UNESCO classified the entire monastic complex of Poblet, including its surrounding gardens, courtyards and walls, as a Cultural World Heritage Site. According to Catalan legislation, the site is a National Monument of Cultural Interest⁵.

In summer 2007, the Catalan Ministry of the Environment and Housing presented a long-awaited plan that will establish a new and much larger natural park in the area, namely the Muntanyes de Prades and Poblet Natural Park [Map 1]. A consultation process to which the Poblet monastic community has made a number of contributions began in the summer of 2007.

In 1991, the Catalan Department of Education launched a workshop on the 'Medieval Cistercian Monasteries of Catalonia' in a youth hostel in the Park. This facility welcomes some 5,000 schoolchildren aged 8 to 18 every year from all over Catalonia who stay for 3-5 days to learn *in situ* about the cultural, spiritual and –more recently– natural heritage of Cistercian monasteries⁶. They follow a very

4 Source: minutes of Park Board meetings.

5 Bé Nacional d'Interès Cultural.

6 Camp d'Aprenentatge dels Monestirs del Cister. Alberg de Joventut l'Espluga de Francolí.

thorough educational programme which includes a number of pre- and post-stay activities. This facility is staffed by six teachers, four of whom are devoted to cultural heritage and two to natural heritage.

Strategic aims

The Poblet Monastery initiatives address three broad issues and seek to:

- i) Improve the management of all the Monastery's facilities and lands through the gradual application of criteria that comply with concepts of environmental and social justice. This strategy has to be based on both secular principles of sustainability and Christian Cistercian principles. Only when every possible effort has been made to define, develop and implement these criteria will the Monastery feel that it has the moral authority to tell others how to implement changes in their life-styles.
- ii) Promote the effective protection of the rural landscape around the Monastery as well as quality forest management that seeks to improve the Monastery's ecological integrity and standards of silence and beauty. The Monastery's direct responsibility is limited in this case, although its representatives can influence the Park Board and other governmental bodies.
- iii) Develop –whenever feasible– an outreach strategy aimed at educating interested visitors in environmental values relating to spiritual principles. This entails improving coordination with the existing Cistercian Monasteries Workshop and the Park educa-

tional services, as well as developing its own facilities and programmes.

A number of meetings have been held with bodies including the Park Board and its management director, the Natural Heritage Directorate, the Tarragona Provincial Council (Diputació de Tarragona), the teachers employed in the education facilities, the University of Barcelona and the Catalan Institute of Energy with a view to achieving these aims. The meetings have opened up new vistas of potential cooperation through which the Monastery can promote many of the actions discussed in the following section.

Actions

The main actions carried out to date are as follows:

- The Monastery has requested the Park Board for permission to proffer itself as a case-study for the Delos initiative, and sought the Board's cooperation in preparing the case-study.
- The Monastery has insisted on a solution to the long-standing problem of the sewage that spills into a stream downstream of the monastery. As of last summer, sewage has been piped to the nearest municipal sewage treatment plant (L'Espluga de Francolí).
- A Memorandum of Understanding has been drafted between the Monastery and the Diputació de Tarragona for the preparation of an environmental audit for the Monastery, which will combine the methodology of the local Agenda 21 with Cistercian principles. The draft includes a detailed method-

ology adapted to the monastic community, the first of its kind in Spain.

- An agreement has been reached with the University of Barcelona's Institute of Water Research to study the monastery's historic water systems (visible and covered) and its water resources. A proposal for improving the Monastery's water management (by recycling waste water and collecting rain water) is to be prepared to allow the Monastery to manage its water resources in a sustainable manner.
- Several meetings have been held with the authorities of the Directorate of Catalan Natural Heritage to discuss and explain the community's concern over some current forest management practices. On July 4th 2007, an agreement was reached that will enable the Park's management team to prepare guidelines for forestry activities.
- In 2006, the Catalan Institute of Energy (ICAEN) prepared two proposals for the use of solar energy in the Monastery at the Monastery's request:

- The first concerns solar photo-voltaic panels for producing electricity, which are to be located discreetly in the coach park outside the Monastery, where they will screen vehicles from the sun. Some 2000 m² of photo-voltaic panels will produce 250 kW; any excess will be sold.
 - The second relates to thermal / solar panels to produce hot water, which are to be located in selected parts of the Monastery's facilities (the guest houses and monks' dormitory, for example) and cover most of the Monastery's hot water needs.
- The Monastery has petitioned the Catalan Ministry of the Environment and Housing regarding the draft plan for the proposed Muntanyes de Prades and Poblet Natural Park, addressing the following issues:
 - The Park's concept and name
 - The Park's boundaries
 - The composition of the Park Board and Steering Committee

Main cloister, in which the Romanesque and Gothic styles are combined





Group of students entering the monastery

- The inclusion of intangible values in the concept of cultural heritage
- Park management goals and criteria related to spiritual values
- Park facilities
- Forest management in the Park

More specifically, regarding the concept and name, the Monastery supports the new enlarged Natural Park (a IUCN category V protected area) and the inclusion of 'Poblet' in its title.

Concerning the boundaries of the proposed new Natural Park, the Monastery has included a report in its petitions, which proposes an alternative boundary that will enlarge the new Park by including the area under greatest pressure from the growth of the nearest urban centre – l'Espluga de Francolí. Three criteria were identified: (i) the need for the Monastery to be protected visually, (ii) landscape quality, (iii) the importance of equating the boundary with easily identifiable physical features (Mallarach & Albertí 2007).

Another report has highlighted the importance of including intangible cultural and spiritual values among the Park's objectives (Silene 2007). Three main themes have been developed:

1. A new definition of natural heritage that includes all significant intangible cultural values and, in particular, religious and spiritual values. For seven centuries, these values have formed the basis of the life of the monastic community and the existence of the Monastery and a number of shrines and hermitages found within the boundaries of the proposed Natural Park.
2. Specific proposals aimed at including spiritual and intangible cultural values in the draft plans at all relevant levels: diagnoses, goals and objectives, management areas, facilities, educational programmes, public use and signposting.
3. A set of proposals that will take the scope of the new definition of cultural heritage into consideration in all new

legal and planning instruments developed by the Natural Park⁷.

Regarding the composition of the future Park Board, the monastic community has requested to be formally represented on both the General Board and Steering Committee.

The main current aims of the Monastery include:

- Preparing a strategic proposal for improving the integration of spiritual, cultural and natural values into the environmental education and information provided by the Monastery of Poblet. The Father Abbot has requested that the Silene Association formulate a proposal with regard to this aim, which will also include a draft plan for a new interpretation centre.
- Including a new section on the Monastery's website (www.poblet.cat) addressing nature, environmental conservation and sustainability.
- Addressing the erosion in the gully that crosses the Monastery's property from north to south and – most importantly – restoring the white poplar riparian forest.

The main actions to be undertaken over the next five years include:

- The gradual implementation of all the projects and actions included in the environmental audit (ranging from so-

lar energy plants and waste-water recycling to an organic vegetable garden) as soon as funding and other constraints allow.

- Promoting the recovery of the riparian forest along the stream using native plant species.
- Establishing an organic vegetable garden using local organic seeds and local varieties of fruit tree once water shortages are solved. The garden will help conserve agro-biodiversity, produce healthy food for the monks and their guests, and provide tasks for interested guests to undertake.
- Preparing a forest management plan, which seeks both to restore the integrity of the forests that have been over-exploited in the past and to gradually transform the forests into more mature structures with greater biodiversity and scenic value.
- Building two interpretation centres, one in the outer walls, the other inside the Monastery. The former will be devoted to the history of the Monastery and the management of its extensive natural resources prior to the nineteenth century; the latter will focus on explaining the meaning and significance of monastic life and its related values (silence, beauty, serenity and interiority) in today's social context.
- Establishing a botanical garden with 128 plant species from the Holy Land, 110 of which have been identified in the Bible by Professor Michael Zohary (1982). The garden will include fruit trees, crops, forest grasses, shrubs and trees, wetlands plants and a

⁷ The two key planning instruments for natural protected areas in Catalonia are the so-called 'Special Plan of Protection' (*Pla especial de protecció*), which defines the zoning and regulations applying in each zone, and the Master Management Plan (*Pla rector d'ús i gestió*), which defines management strategies and goals.

number of species used in the preparation of medicines and perfumes.

Conclusions

The Poblet case-study could play a significant role within the Delos Initiative as a good example of a monastic community's willingness to undertake a series of nature conservation and sustainability actions that enjoy the support of an international initiative aiming to integrate intangible values into nature conservation.

Poblet also exemplifies the historical coherence of a community of monks with its Christian, Benedictine and Cistercian origins. The monks have a clear desire to work to foster respect for God's Creation and appreciate the surroundings of the Monastery not only as a resource to be carefully exploited, but also as a gift to be passed on to future generations of monks.

Seeking through its current and planned activities to encompass every area of interaction between the Monastery and the natural world, from water to energy and forest protection to waste treatment, the Monastery has nurtured an array of collaboration agreements in all these aspects. In order to obtain support for these actions, representatives of the Monastery have held meetings with bodies including the Poblet Park Board, the Natural Heritage Directorate, the managing director of the Protected Site, the Diputació de Tarragona (provincial government), the teachers in charge of the environmental education facilities, a research team from the University of Barcelona and the Catalan Institute of Energy. As a result, new fields for cooperation with the Mon-

astery have opened up, most of which will be promoted in the years to come.

It is worth underlining the fact that the implementation of these policies will satisfy Spanish and international recommendations that intangible cultural and spiritual values should be taken into account in the concepts, goals, objectives, management areas / guidelines and facilities both of the current natural protected area (especially via the specific activities that the Monastery wants to promote) and the future Muntanyes de Prades and Poblet Natural Park.

Of these planned activities, the most relevant to the Delos Initiative, apart from conservation, is the education of visitors to the Monastery, where the aim is to inculcate in visitors a greater respect for nature stemming from spiritual criteria and values that seek to be consistent with those deeply-held beliefs that give life its essential purpose. We believe that this unobtrusive but ever-present mission could be one of the greatest contributions of monastic life to the men and women of our times.

Since the Delos2 Workshop in 2007, the Monastery of Poblet has undertaken a number of actions, so as to improve its environmental coherence, mainly as far as energy and water-use are concerned. However, the most significant action, perhaps, has been a binding Declaration, adopted by the monastic community after a long time of reflection during July 2009, which summarises both the theological and scientific reasons for the 'ecological conversion' and details the strategic goals and practical objectives. The Declaration, translated in many languages, can be downloaded from the website of the Monastery.

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- Workshop of the Cistercian Monasteries [*Camp d'Aprenentatge dels Monestirs del Cister*] (only in Catalan):<http://www.xtec.cat/cda-monestirs/>

- UNESCO World Heritage Sites: <http://whc.unesco.org/en/list/518/documents/>

The inner wall and royal towers in winter





Rila Monastery Natural Park

Bulgaria

Josep-Maria Mallarach

Sebastian Catanoiu

The Rila Monastery Natural Park, and the Rila National Park that surrounds it, constitute one of the largest and most significant protected areas in Europe. That the area has received 'natural park' status is due to the efforts of a Christian Church, namely the Bulgarian Orthodox Church. The Rila Monastery Natural Park provides us with a paradigm for the effective conservation of an area's natural, spiritual and cultural heritage, and for the efficient integration of spiritual, cultural and natural values into both the decision-making process and communication with the public.

Rila Monastery was founded by Saint Ivan Rilsky in the early 10th century. That its founder was a hermit may explain the 'holy unity' or synergy that has always existed between the monastery and its natural surroundings. The Monastery owned and managed an extensive estate until 1947, when its properties came under the supervision and management of Bulgaria's Communist government. After the fall of Communism, the land was returned to the Bulgarian Orthodox church in sections between 1998 and 2002. In 1983, UNESCO included Rila Monastery among its World Heritage Sites.

The Bulgarian people consider Rila Monastery, snuggled as it is in the bosom of Bulgaria's most majestic mountain, to be their country's holiest site. It is the sec-

ond largest monastery in the Balkans, with a history that goes back a millennium. There are several holy sites in and around the Monastery including sacred springs, the cave of the founder and five hermitages. Its small community of monks are devoted to preserving their monastery.

For many centuries, Rila Monastery was a stronghold of the Bulgarian language and national culture and buttressed the Bulgarian people's consciousness of their own identity. The first book on the history of the Bulgarian nation was written in Rila Monastery, which also houses one of the oldest and most important libraries in the Balkans.

The Natural Park has healthy ecosystems and spectacular mountain landscapes ranging in altitude from c.1,000 to 2,700 metres above sea level. It encompasses 28 lakes, most of which are of glacial origin, and outstanding forests of various types including beech, oak, spruce, and mixed forests, which number among the oldest in the country. Its forests and meadows are home to 36 native tree species and many endemic plants, 20 of which are unique to the area. The Park's fauna is also diverse, and includes —at the top of the forest food chain— large wolf and brown bear populations.

In 2000, a Bulgarian Ministry of the Environment and Water Resources decree formally created the Natural Park of Rila Monastery National Park. Of the 25,000 ha included in the protected area, 19,000 are owned by the Church (Natural Park) and 3,600 are part of a state nature reserve.

The Natural Park's management plan was drawn up in 2003 by an interdisciplinary team following extensive consultation with the Park's management team. The main provisions of the management plan include a zoning system which incorporates spiritual values and the prohibition of hunting and harvesting, excepting a small quota to cover the needs of the monastic community. The main goals of the management plan relate to conserving the area's spiritual, natural and cultural heritage; managing its natural resources in terms of tourism; and raising awareness through educational schemes. It also assigns importance to the need to effectively coordinate the activities of the competent ecclesiastical and state organisations with a view to preserving the unity that prevails between nature and the Rila Monastery, and to re-establishing the area as the epicentre of Bulgaria's spiritual and cultural life.



Inner court of Rila Monastery

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We would like to thank the Natural Park director, Mr Avramov, and his management team for the information they provided us with during our visit.

Website

<http://www.rilamonastery.pmg-blg.com>



The inclusion of a Tibetan Buddhist perspective in the management of the property of the Sakya Tashi Ling Monastery in Garraf Park, Catalonia, Spain

Sakya Tashi Ling, El Garraf Park, Catalonia, Spain

Isabel Soria García

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Introduction

The draft management plan for the Sakya Tashi Ling Monastery property,

efforts of organisations concerned with nature conservation. Any attempt to synthesise the actions of diverse organisations such as the Delos Initiative, the Fundació Territori i Paisatge, Garraf Park and the Sakya Tashi Ling Trust (Prevain Trust), would have to take into account the potentially differing views and perspectives of these organisations.

The framework

The monastery is located in the middle of El Garraf Park to the southwest of Barcelona. The park forms part of the green belt of protected natural areas in the Barcelona Metropolitan Area, and is managed by the Barcelona County Council Parks Service. The monastery property, which is 136 ha in area, is managed by the monastic community according to the guidelines set down in the Special Protection Plan for El Garraf Park (henceforth referred to as the park management plan)² (Source: Consultant X3 Estudis Ambientals).

The greater part of Garraf Park has a typically dry, southern Mediterranean landscape. Its vegetation is *garrigue*, with typical Mediterranean xerophytic flora found on limestone, and *brolla*, a variety of scrub that grows on south-facing slopes. Both types of vegetation have developed on top of a karstic morphology. Various forms of human activity over the last three millennia have contributed to significant changes to the landscape. Today, a suburban residential area is be-

ing built near the monastery. The bid to halt the 'Plana Novella' project has proven unsuccessful, as the plan had been approved prior to the establishment of the park (see map in p. 179).

One of the main reasons underlying the monastic community's decision to select this area was that, with its almost complete lack of tree cover, it was the only place near Barcelona that bore a similarity to the Tibetan landscape. All the other coastal sierras in the area were forested.

The Buddhist monastery is currently one of the park's top tourist attractions, and welcomes about 40,000 visitors annually. Most, attracted by the activities and courses offered by the monastic community, are interested in taking part in cultural and spiritual tourism. Visitors also come to see the Palau Novella, a building of cultural importance in which most members of the community actually live. The edifice, a typical Catalanian palace that is both modernist and eclectic, was constructed during the 1890s and was surrounded by a wall. It is now home to a museum of Tibetan sacred art.

The Sakya Tashi Ling community is made up of seventeen permanent members who live at the monastery. They are nuns and monks who have devoted their lives to a common life, the aim of which is to work for other people's well-being and future life, in accordance with the teachings and beliefs of the Sakya School.

It is worth noting that the monastic community enjoys a distinctive relationship with the nature that surrounds it. The Tibetan Buddhist teachings and worldview promote positive attitudes and activities

² According to Catalan legislation, this is the most common type of management plan for natural protected areas in Catalonia, and includes a zoning, regulation and action plan.

towards nature conservation which differ very much from the prevalent views of mainstream society in western Europe. As a general principle, the monastic community respects the rights of all beings living in the natural world. Consequently, a number of their proposals, such as one calling for a stop to all forms of hunting (an activity that is allowed in the park at present), are not understood by park managers or neighbours; in a few cases, their proposals are even viewed as a threat. It appears that the lack of awareness on the part of the park managers regarding these spiritual and cultural values, coupled with misinterpretation concerning the relationship that the monks and nuns have with the natural world, often lead to such misunderstandings. It is therefore not surprising that the monastery and some of its visitors have at times been considered part of a problem rather than elements that could generate new and complementary values that would help lead to nature conservation.

Goals and objectives

The main goal underlying the efforts to produce a new management plan was to create a plan that would be fully consistent with the spiritual values of the Sakya Tashi Ling community and the worldview that governs its relationship with nature. This perspective would be consistent with the principles guiding western science as well, and as a result would be deemed appropriate by the sponsors and the park managers.

This general goal would be achieved through the attainment of a number of specific objectives:

- To understand the links between the monastic community and nature;
- To draft a management plan based on Tibetan Buddhist principles, supported by western science;
- To include new activities or projects necessary for the furthering of the community's aims;

Sakya Tashi Ling Monastery and the main stupa surrounded by prayer mills





Place of Naga's offerings within the Sakya Tashi Ling Monastery

- To produce a document useful for mediation purposes among different stakeholders;
- To discuss the plan with all stakeholders until a consensus is reached.

Methodology

One of the best ways to understand the underlying values of the relationship between the monastic community and nature is to become involved in the daily life of the community and share its everyday concerns. Thus, after several preliminary interviews and drafts, it was deemed time for a field trip. In the course of a one-week stay, a number of people were interviewed, including the leaders and members of the monastic community who had been given specific responsibilities. Various Buddhist texts were also examined over the same period. In addition, the opportunity arose to further appreciate the rationale behind the Tibetan Buddhists' relationship with the natural

world. Two questionnaires were used at this stage: one developed by the Delos Initiative for case studies that helped evaluate the physical site, and a second that analysed spiritual values by focusing on people's in-depth experiences with(in) nature. This second questionnaire was prepared by the author while conducting a case study of Holy Island in Scotland, where another Tibetan Buddhist community has settled (Soria 2007; see Appendix I).

The openness of the members of the community allowed for numerous conversations to take place on some of the daily environment-related habits of the community. In addition, it offered the opportunity for advice to be given on ways in which the development of the area could become even more sustainable. One of the proposals included in the management plan is based on the use of the three R's: Reduce, Reuse and Recycle. Furthermore, it is recommended that several practices associated with water use be changed, and that a sus-

tainable approach be adopted concerning food, energy, transport and waste (such as using local products, avoiding products without recyclable packaging and so forth). It is important to emphasise that all of these recommendations have been derived from and / or linked to Tibetan Buddhist doctrines, such as the principle of 'Chi-Sen' – the universal responsibility or mindfulness, as this has been explained by the Dalai Lama. The members of the community were very receptive to all of these recommendations, and began to implement them shortly afterwards.

Once the spiritual values of the monastic community had been sufficiently understood by the author, other key stakeholders were interviewed. These included the director of management at the park, various neighbouring stakeholders within the park area (such as the mayor of the Municipality of Olivella and the president of a neighbourhood association involved in a dispute with the monastery) and a number of visitors. Further data analysis revealed the interdependent and interactive relationships between the monastic community and other local stakeholders. Relations between the parties involved were observed as ranging from good and frank to indifferent and even conflictive. Whatever the case, all distinct views, ideas and concerns should ideally be fully understood before being incorporated and integrated into any improved version of a management plan.

After obtaining the necessary information *in situ*, the author began working on the management plan. At the outset, it was believed that this process would be

limited to a few modifications to the initial management plan required to introduce relevant Buddhist values into the plan. However, when the author began drafting the new chapter on the Buddhist worldview and started to examine the possible implications of these values, it became evident that the whole plan was in need of restructuring. Since the general purpose of the initial plan had been defined according to other terms (see Table in p. 184), it seemed logical that a variety of other, different management objectives would arise as a result, and it was deemed necessary to broaden the plan to include new projects and activities.

As soon as a new draft of an integrated management plan had been completed, it was presented to the main stakeholders for review and evaluation. It was hoped that this new, extended plan would help build consensus between the main stakeholders and the monastery.

Results

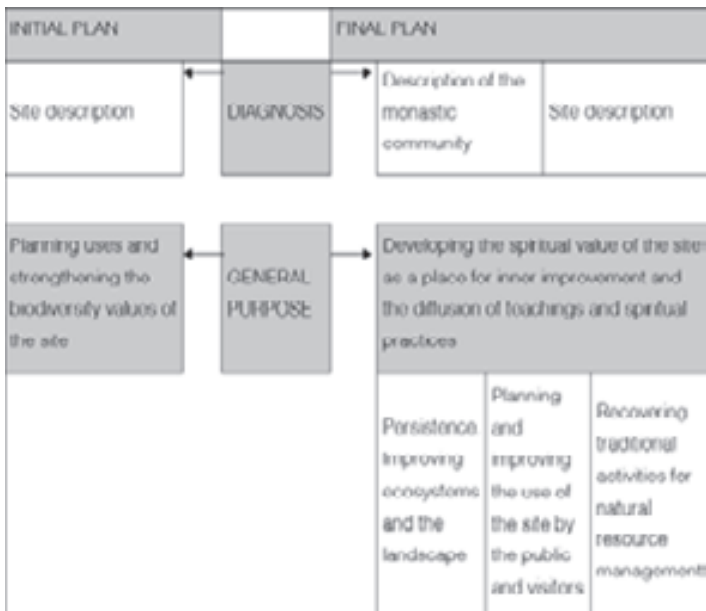
The initial management plan, like others of its kind, had been based on ecological values and the constraints of the property, as well as on the park regulations in force at the time. The improved version now included and incorporated Vajrayana cultural and spiritual values linked to nature conservation.

The new, revised plan begins with a detailed description of the monastic community before moving on to an exposition of the principles of Vajrayana Buddhism and an introduction to the tradi-

tional Tibetan Sciences. This is succeeded by an account of how these principles are –or will be– applied to the management of the monastic property, and an interpretation of the relationship between nature and the monastic community. It closes with an examination of principles and guidelines derived from previous versions of the management plan.

In keeping with the aforementioned points, the primary aim of the new and revised management plan focuses on ‘implementing and enhancing the religious value of the site in order to have a space to develop inner improvement and disseminate the practice and teachings needed to achieve enlightenment’. This implies that several modifications (see Table in p. 186) will have to be made to

the monastery property to improve and further develop the spiritual practices of the monastic community. In Buddhism, nature conservation is completely integrated into spiritual improvement: “The Buddhist literature mentions the sanctity of the environment as inspiring and blessing the practitioner, and in turn the practitioner’s spiritual realisation blessing the environment” (Dalai Lama 2004). Thus, the key principle of involving nature conservation in the inner improvement of the monastic community forms the foundation of the new management plan, which fully addresses the main concerns of the community in its key objectives, which include the protection and improvement of natural values, the development of public use of the site in a respectful manner,



Differences between the initial and final management plans

and the recovery of certain traditional land uses and activities. This last measure will also provide a habitat for some endangered species like Bonelli's Eagle (*Hieraetus fasciatus*) and Hermann's Tortoise (*Testudo hermanni*).

The table summarises the key aspects of both the initial and final management plans. It shows the improvements offered by the new integrated version.

As is most likely evident from the table, a different set of guiding values has now been drawn up. This includes both initial values and some new, complementary ones related to the Tibetan Buddhist worldview such as the 'development of meditation in nature for spiritual improvement'. Specific management goals, under distinct management schemes, have been set and will be implemented with a view to promoting this new set of guiding values.

On 28 March 2007, a revised draft of the new management plan was presented to the monastic community. It was discussed with the Abbot of the monastery, the heads of the Fundació Territori i Paisatge and the consultancy, who all agreed with the manner in which spiritual values were included and presented in the new management plan. The participants expressed their satisfaction with the new approach and endorsed it fully.

The same document was presented to the Barcelona County Parks Service, the agency responsible for Garraf Park. The main aim was to build consensus and find common ground between spiritual and conservation values in order to im-

prove cooperative efforts targeted at conservation. Both the head of the Park Service and the management director of El Garraf Park exhibited a very open attitude, agreeing to review the management plan and showing a willingness to find common ground.

After these meetings, the draft plan was given to both the Fundació Territori i Paisatge and the Barcelona County Parks Service for revision. A few weeks later, the Parks Service offered some suggestions that took into account the consequences of the actions proposed in the revised plan on the overall aims of Garraf Park.

Conclusion

The new integrated management plan for the property of the Sakya Tashi Ling Monastery defines a set of conservation management objectives that could be fully supported and endorsed by both the Sakya Tashi Ling Monastery and the managers of Garraf Park.

The table in p. 186 summarises the compatibility and consistency of the key aspects introduced by the new management plan.

It appears that the attempt to improve the management plan within the framework of the Delos Initiative has resulted in the successful integration of the requirements and the spiritual and cultural values of the Buddhist community into the Park's nature conservation strategy. At the same time, cooperation between the managers of the park and the monastic community have also improved.

	GARRAF NATURAL PARK	SAKYA TASHI LING MONASTERY	CONSISTENCY
GENERAL PURPOSE	Establishment of a regime designed to protect, conserve and improve the Park's physical and rural environment.	Development of the area's spiritual value as a place for inner improvement and the diffusion of teachings and spiritual practices.	Buddhist religious values include the sacred value of nature, resulting in respectful attitudes towards nature.
PREMISES	Natural resources and artificial elements, generated by human intervention down the ages have to be considered as two parts of a complex interrelationship between Man and the Natural Environment.	The main driving force – the spiritual values of the communities – must be considered; the spiritual values of the religious community must be accepted in order to set nature management guidelines; guidelines must be adapted to the requirements for the protection of all living beings in the area.	Both the monastery and park consider the relationship between Man and Nature to be essential for nature conservation. For the monastery, this relationship is not limited to the physical environment – it also encompasses the sacred dimension in which spiritual values play the main role.
MANAGEMENT OBJECTIVES	Planning the use of resources; the development of activities involving the local community	<ul style="list-style-type: none"> - The physical environment: The improvement of habitats and the local landscape - Public use: The improvement and planning of visitor flows to and from the monastery and the impact of visitors, neighbours and nature - The recovery of some traditional management activities (e.g. beekeeping) - The spiritual aspect: The improvement of positive energy using various rituals, practices, sacred art etc. 	<ul style="list-style-type: none"> - The management objectives of the park can promote the development of local activities such as agriculture and stock raising in addition to the public use of the park, as long as these are compatible with nature conservation. The monastery management plan has been developed based on this premise. The special relationship between the community and nature promotes conservation values. - The management objectives of the monastery stem from the Buddhist principles and values that guide daily life in the community. These principles support land use zoning on the property. Different land uses are adopted according to the main objectives of protecting and restoring the natural and cultural values of the park.

Compatibility and consistency of key aspects of the new Management Plan

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Appendix

Questionnaire 1: Delos Initiative Initial Pilot Site Questionnaire

1. Natural Values

- 1.1 What are the main elements of the natural heritage of the particular site?
- 1.2 Does the site enjoy institutional protection in view of its natural heritage values?
- 1.3 Who is responsible for managing and conserving the site?
- 1.4 What are the main activities related to its natural heritage values?
- 1.5 Are the local population and visitors to the protected area aware of and concerned about its natural values?

2. Spiritual and Cultural Values

- 2.1 What are the main spiritual and cultural values of the site?
- 2.2 Do these values relate to specific natural or anthropogenic elements. If yes, which elements?
- 2.3 Are the identified spiritual values related to a specific mainstream faith?
- 2.4 Are these spiritual values more pertinent to specific social groups? Are they recognised / understood by the public at large?
- 2.5 What body is responsible for conserving and enhancing the cultural and spiritual heritage in the area?
- 2.6 What are the main activities related to the spiritual and cultural values?
- 2.7 Is the population living in or visiting the protected area aware of and concerned about its spiritual and cultural values?

3. Development Pressures

- 3.1 What are the major economic activities in the area at present?
- 3.2 What human activities indicate a high degree of dynamism and expansion?
- 3.3 How do the current and activities and those under development impact on the natural environment?
- 3.4 How do the same activities impact on the spiritual and cultural aspects of the site?
- 3.5 Are there conflicts between conserving the natural heritage and protecting spiritual and cultural values?
- 3.6 Does land use planning exist for the area. If yes, is it effectively enforced?

4. Conservation Perspectives and Sustainability

- 4.1. What are the trends in the conservation of the natural heritage of the site?
- 4.2. What are the trends in the protection of the cultural and spiritual heritage?
- 4.3. Could spiritual values contribute to the conservation of the natural environment? How?
- 4.4 Could nature conservation legislation and management practices help safeguard the spiritual values of the site? How?
- 4.5. Is there cooperative action between the conservation of the natural heritage and the protection of spiritual and cultural values? Who are the main champions of each cause, and who would champion a more integrated approach?
- 4.6. How could a well-preserved natural and cultural / spiritual wealth contribute to a balanced socio-economic development of the area?

5. Recommendations

- 5.1 What gaps are there in our knowledge of the natural, spiritual and cultural heritage of the site, and how could these be filled?
- 5.2 How could a synergy be created among those responsible for nature conservation and management, on the one hand, and those involved with spiritual and

cultural heritage protection, on the other? How could such a collaborative effort be enlarged to include those responsible for guiding the socio-economic development of the area, as well?

- 5.3 Which legislative, planning, management and implementation tools could be used to facilitate an integrated approach to the conservation of both natural and cultural / spiritual heritage?
- 5.4 How could an integrated view of the site — one combining both spiritual / cultural aspects and natural heritage values as well as perspectives regarding sustainable development — be created with local communities, decision-makers, visitors and the general public at large?

Questionnaire 2: In-depth Interview

1. Are you a person who often feels close to nature?
2. Does this extend to a feeling that you belong to nature?
3. Are there places to which you feel a special sense of belonging?
4. Have you ever experienced a sense of belonging or connection to nature that you might describe as 'sacred'?
5. Would you agree that a sense of belonging can be informed or inspired by a sense of sacredness?
6. Why do you think hermits and recluses often retreat to nature for inspiration?
7. Do you see Sakya Tashi Ling as a place where nature and the spiritual converge? In what way does this occur?
8. Do you think there is a relationship between nature and the spiritual? If so, does it have implications on how nature conservation is understood and managed?

Garraf landscape





Reflections on the management of monastic lands and facilities

Josep-Maria Mallarach and Thymio Papayannis

Monastic lands and protected areas

In recent years, there has been a noticeable trend towards the secularisation of land in many parts of the world. In spite of this tendency, monastic communities continue to own and manage large tracts of land, many of which contain important habitats and species. This is commonly the case in countries with Catholic or Orthodox Christian traditions, as well as in those where Buddhism is a major religion. Land management by monastic communities is less frequent in the case of Hinduism, Islam or Jainism.

A section of this land – which in most cases had been bequeathed by pious rulers or wealthy landowners to monastic communities – was traditionally set aside to

fulfil the monasteries' everyday needs. It included areas reserved for habitation, cultivation and the supply of timber, water and other necessities. The rest of the land, which often covered a considerable area, was left untouched and, in many cases, remains in a state verging on natural. Much of this land has since evolved into nature protection areas.

In most European countries, monastic land has been expropriated at some point by the state for social and / or political reasons. An example of this was the mass confiscation of land belonging to religious institutions after the introduction of Socialism into many countries in central and Eastern Europe. However, this changed with the demise of the Soviet Union in 1991, which was followed

by a resurgence of religious worship and a revival of monasticism in Eastern Europe. At that point, efforts were made to reclaim the land that had been lost, and in some instances these proved successful. In another case, monastic lands in Greece were expropriated after 1922 to house Greek immigrants from Asia Minor; these, however, were never returned.

Regardless of what has happened to monastic lands to date, they remain significant for nature conservation for three main reasons. Firstly, a large number of protected areas (usually IUCN category V) are to be found in Europe and Asia on former or current monastic lands. Secondly, in many cases it was the monastic communities themselves that instigated and promoted the safeguarding of many areas that are now under protection. In many instances this occurred as a result of concern about the deterioration of the natural environment around their monasteries. Thirdly, many new monasteries have been built on existing protected areas, usually natural parks —this is the case in several natural regional parks in France, for example. A number of cases were presented at the Delos workshops at Montserrat and Ouranoupolis in 2006 and 2007 respectively, which touched upon noteworthy examples of these different scenarios.

Prerequisites for sound management

The beliefs and practices of most monastic communities help prepare them for, and guide them in, the sensitive and

wise management of their lands and facilities. As a result, they often develop, implement and maintain practices favourable to nature conservation. Arguably the most important of these is the profound respect for tradition that characterises monasticism. This is related to a unique sense of time, which ensures continuity and stability since the past is not lost and the future is to be gained; this view makes change acceptable —but at a manageable rate.

Specifically, monastic communities follow time-tested rules of living that ensure sustainability by cultivating a long-term vision. Christian monasticism, for example, is based on principles and rules laid down by saints Basil and Benedict 16 and 14 centuries ago respectively. In the case of Buddhism, the seeds are to be found even further back, despite Tibetan Buddhism being only six centuries old.

One of the key principles involved is asceticism, which implies the use of natural resources to cover only essential needs. It is often associated with the absence of private property and, as a consequence, is linked to poverty, thus encouraging the personal traits of sobriety and temperance. In a number of monastic orders — particularly in Orthodox Christianity— asceticism is reinforced by the pursuit of self-sufficiency, which encourages the development of skills for the frugal management of locally-available resources. Consequently, in many countries of Europe, monastic communities have a long-established tradition of using natural resources prudently and of developing technologies based on renewable energy.

One such example would be the Camaldoli monks of Foreste Casentinesi (a national park in central Italy), who developed efficient, sustainable practices for the forests of the Apennine Mountains, and in so doing laid the groundwork for modern forestry regulations in Italy (Hughes 2009).

Monastic communities are usually vegetarian, although fish may be consumed on major feast days. In Catholic monasteries, meat is permitted for the weak and sick. Another benefit of a vegetarian food regime is that it is generally accepted that it significantly reduces one's environmental footprint.

Most monastic communities take part in such practices, and in doing so contribute to the sound stewardship of monastic lands. The majority of monasteries are governed according to a judicious and balanced decision-making system rooted in ancient traditions. This system usually applies the precautionary principle (the cardinal Christian virtue of *prudentia*), and procedures move slowly, thus avoiding haste and undesirable developments. A high level of discipline complements this diligence in decision-making, and the entire undertaking is seen as an attempt to approach freedom through obedience. As a result, once a decision is taken, all members of the monastic community implement it without hesitation.

A further principle shared by most monastic communities is hospitality to guests. By allowing personal contact with pilgrims and visitors, this provides an opportunity to raise guests' aware-

ness of environmental issues and to disseminate sound nature protection practices, mainly by example through the practices and lifestyle adopted by monastic communities.

In addition, many monastic communities include a number of hermits living in isolated locations outside the monasteries. Over the past two decades, hermitism has experienced a revival in countries in Western as well as Eastern Europe. In France, for example, which is considered a highly secularised country, there were over 200 Catholic hermits and three schools to prepare individuals for this kind of lifestyle in 2001 (Muizon 2001). The hermit is the quintessential example of a deeply religious individual who lives and prays in solitude with minimal resources and in profound harmony with nature. St Francis of Assisi and St Seraphim of Sarov are well-known examples of people who loved nature in general, and large mammals in particular.

Monastic lands as protected areas

As a consequence of this positive approach and its results, many of the Christian monastic lands could be classified, along general lines, as protected landscapes falling within IUCN category V (Mallarach 2008). Hermitic domains, on which most extractive and other land uses are not permitted, could be characterised as nature reserves in most instances, as stipulated by IUCN category III. According to both the CBD and IUCN definitions of a protected area (Dudley 2008), as long as the land is managed in



Refectory in Megalo Meteoro Monastery, Meteora, Greece

adherence with the principles that apply to such protected areas (as laid down for each category), it should be recognised as protected land, even if the protection status has not been formally established.

In contrast, in countries where monasticism has been constrained or abolished for a period of time — as in the Protestant countries of Europe¹, in France and in Spain — the impact on nature conservation has been extremely negative. For example, there are cases of exceptional forests managed wisely for centuries by monastic communities being levelled within a few years of being transferred to private owners (as the case of the forest of Poblet illustrates [Altisent 1974]).

In the USA, the Amish (Protestant Mennonite) communities established in Pen-

nsylvania, Ohio and Indiana present a somewhat different picture. These communities have systematically and prudently applied the precautionary principle to new technologies and renewable energy. What has emerged is a distinctive, rural society, which is both socially and economically resilient and very close to nature. Although they consider themselves 'plain people', they use efficient technologies most of the world would consider advanced. The Amish communities have succeeded in conserving large areas of beautiful and diverse landscapes in the heart of the American Corn Belt without receiving governmental subsidies or adopting complicated strategies (Légeret 2000). Amish communities have even hosted US national solar conferences in recent years.

In countries where Buddhist monastic communities have traditionally been supported through alms provided by members of their local society, monastic

1 For example, the Dissolution of the Monasteries in England and Wales between 1536 and 1540 by Henry VIII, and in Austria in 1782 by Joseph II, the son of Maria Theresa (Johnston 2000; Cannon 2004).



Vineyards at Solan Monastery, France

lands tend to include high-quality living quarters, which are usually very well maintained. Tibet and the area of Ladak are considered very fine examples of this. Bhutan, a country which has kept the Tibetan Buddhist tradition alive, has one of the best-planned protected area systems in Asia.

South Korea stands out among the countries that have decided to create protected areas in recent times. The national park system in that country was mostly established on monastic lands in agreement with monastic authorities (Kyun-Koo Han, oral communication, 2007). Jirison National Park, the first such park in the country, is considered to include the birthplace of Korean Buddhism. Today, the park entrance fees go to the monastic communities involved.

Many of the new Buddhist monasteries established over the past forty years in Europe and North America also aim to serve as examples of sound environmental policy (Semkyre 2008). A good

case is that of the Zen Buddhist monastery of Plum Village, where walking meditation in nature is taught.

It should thus not come as a surprise that several contemporary thinkers maintain that monastic communities —through their enduring principles and practices— can provide us with important lessons in how to deal with the global environmental and sustainability crisis, and that asceticism could become one of the core concepts of the new ecology (Canon 2004, Dubos 1974).

Existing contradictions

Any objective assessment must, however, also take negative realities into account. One cannot fail to recognise that not all the land managed by monastic communities is in a sound state with effective protection in place for its natural, cultural and spiritual heritage. The reasons this is so vary with the context, but it could be argued that the major prob-

lems faced in such cases have come about as a result of adopting modernity in its various aspects without critically examining it first. Thus, deciding to employ modern technologies, production methods or facilities may not always be suitable for the specific environmental or landscape context or conditions, and may lead, for example, to the abandonment of traditional handcrafting practices and their replacement by highly mechanised systems which often have a negative impact on the environment. Machines powered by fossil fuels, such as automobiles, are perhaps the most characteristic examples.

These newly-introduced practices are often encouraged by the temptation to generate revenue quickly through the adoption of unsustainable management practices with regard to natural resources (felling trees for timber, for example) or through the sale of real estate. The temptation is stronger in countries where religious organisations are recovering after years of oppression and funds are required for the restoration or construction of religious facilities. Such examples have been noted in Eastern Europe, and particularly in Romania².

For similar reasons, a misinterpretation of the monastic duty of hospitality has sometimes opened the gate to an excessive flow of visitors. In extreme cases, this can degrade the natural environment, debase the cultural heritage and

even erode the spirituality of monastic establishments, compromising the quality of the visit for pilgrims and other visitors as a result. Examples would include the Monastery of Montserrat in Catalonia, Spain, where traffic jams mar major feast days, and the Meteora monasteries in central Greece, which are crowded with hundreds of buses and thousands of visitors at peak times.

On another level, as monks are individuals drawn from contemporary —and often urban— society, they may be tempted to yield to pressures exerted by the materialistic society surrounding them. Some may even go so far as to adopt behaviour patterns based on unnecessary consumption and unsound waste disposal which have clear negative implications for the environment.

A careful look at these imprudent tendencies reveals two major contemporary weaknesses that may be responsible for this situation. The first is weak spiritual guidance within the monastic community, which permits deviation from firm monastic principles. Abbot Elissaios of the Simonopetra Monastery on Mount Athos once remarked that a monastery is not a museum, but a contemporary institution, which knows very well what it needs from the modern world and can adapt it to its spiritual needs (Papayannis and Elissaios 1992). The second shortcoming is ignorance, which does not allow some monastic communities to fully understand the negative environmental and social impact of their actions. An example of this would be the use of fossil fuels or non-renewable resources and materials. The

2 "The churches have already begun to take steps to use their new freedom to revitalise their communities and transform their nation in the light of their own particular perspectives" (Poppe 1991).

Delos Initiative and similar efforts can provide help in this area.

Contemporary challenges and responses

It is clear that the custodians of sacred natural areas and conservation leaders must encourage and adopt a more serious approach to educating monastic communities in relation to the environment. Such an effort would have to take into account every aspect of environmental management, including monastery facilities and sustainable production practices like organic farming, the raising of livestock, timber certification and fishing.

On the positive side, there are a number of monastic communities that have set a fine example through the sound practices they have adopted from the outset. These include the Orthodox Monastery of Solan in southern France, which specialises in high-quality organic products like wine and organises activities to pro-

mote organic farming methods; the Orthodox Monastery of Chrysopigi on Crete; and the Catholic monastery of Rieunette, which is also in southern France. All three are also good examples of monastic communities that show concern for the environment.

Many monasteries have responded to contemporary challenges by increasing their production of high-quality, organic food products (including beverages, cheese, jam and other goods) and traditional handicrafts. These products are increasingly being marketed under distinct monastic labels, as in the case of items produced by French and Romanian monasteries. The excellence of monastic products has been widely acknowledged in Europe; indeed, in Belgium, for instance, most beer and alcoholic beverage producers market monastic brands under the name of abbeys that do not even exist.

Any environmental education in monastic communities should also be aimed at the pilgrims and visitors to these areas.

Vineyards near Iviron Monastery, Holy Mountain



Ideally, it should teach them to respect nature and become prudent guardians of the environment, employing spiritual criteria and values related to deeply-held beliefs that give life its ultimate purpose. Such teaching by the monks themselves would not only strengthen their own beliefs, but also promote the notion that monastic lands are not a 'resource' to be exploited, however carefully, but rather a manifestation of God —a gift to be passed on in its entirety to future generations of monks and the faithful. The activities organised by the Monastery of Camaldoli in Italy provide a fine example of the influence that a committed monastic community can have in this field (Hughes 2009).

It is very interesting to note that the third Catholic and Buddhist interreligious / intermonastic encounter held at the Cistercian Abbey of Our Lady of Gethsemani in Kentucky (where Father Thomas Merton lived for many years) in 2008 was dedicated to the environment. We can thus conclude that a large number of monasteries, especially ones located in protected areas, could follow this path, and that in doing so they could foster a wide-ranging, interreligious monastic dialogue on the ecological management of monastic lands and facilities focused on common principles, mutual support and the dissemination of best practices and know-how.

It could be argued that a common aim for monastic communities and visitors alike should be to maintain —or restore, when necessary— the harmonious relationship between monastic facilities, buildings and productive activities on the one hand, and the environment on the other. This would involve paying careful attention to the integrity and beauty of the surrounding landscape, as well as to the invisible impact of actions on the local environment.

Thus, in order to become —or remain— respected role models in the sphere of nature conservation in addition to carrying out their religious function, monastic communities need to strive to act in a manner which is fully consistent with their beliefs vis-à-vis nature and creation. This is even more challenging —and pressing— in the midst of a global environmental crisis exacerbated by contradictions on many levels. Such action should include not only sound land management, but also interaction between the monasteries and the natural world in areas ranging from water to energy and from species protection to waste reduction and treatment. The fact that some of the most environmentally-aware monasteries in Europe also number among the world's fastest-growing monastic communities can definitely be seen as an encouraging sign for the future.

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Part Three

Achieving synergy between spiritual and conservation concerns



IUCN-UNESCO Guidelines for protected area managers on Sacred Natural Sites: rationale, process and consultation

Robert Wild

Abstract

The IUCN Specialist Group on Cultural and Spiritual Values of Protected Areas works under the auspices of the IUCN World Commission for Protected Areas (WPCA). Over recent years, it has been promoting the conservation and management of sacred natural sites and collaborating with the Man and the Biosphere Programme of UNESCO to develop guidelines for protected area management, i.e. for managers and their agencies. The guidelines emerged out of a number of meetings starting in 1998 which were organised by UNESCO and IUCN, often in collaboration. These meetings were held in India, Mexico, China, South Africa, Japan, the UK and now Greece (2007). Over a similar time period, related

work has also been carried out on sacred natural sites by other organisations such as the World Wide Fund for Nature and the Alliance for Religion and Conservation. Also of relevance to sacred natural sites is the large body of work on common property resource management and the collaborative management of protected areas; the recent recognition of Indigenous and Community Conserved Areas as a legitimate form of protected area governance is very much a reflection of the lessons learnt from both.

The drafting process of the guidelines related to sacred natural sites started in 2003, and by 2005 a preliminary set of working guidelines had been developed, made available on the internet and then published by UNESCO (UNESCO 2003).

During 2006-07, these guidelines were developed further in preparation for their publication in 2008 as one of the volumes of the IUCN-WCPA 'Protected Area Best Practice Guideline Series' (Wild and McLeod 2008). Draft versions were presented for comment at meetings specifically related to sacred natural sites in Mongolia, the UK and Greece, as well as at the second Latin American Congress on National Parks and other Protected Areas held in Bariloche, Argentina in October 2007. In addition to drawing on over 50 case studies relating to indigenous and mainstream faiths, the guidelines were reviewed by indigenous park managers and leaders as well as by individuals from the UN Permanent Forum on Indigenous Issues.

These guidelines, then, are one manifestation of a greater recognition of the historical and contemporary conservation efforts of many communities across the globe based on deep-rooted values that stem from a deep appreciation of — and relationship with — the natural world.

Sacred natural sites: potential and threats

Recent research has shown that sacred natural sites make a significant contribution to the conservation of both nature and culture (Ramakrishnan *et al.* 1998, Harmon and Putney 2003, Bhagwat and Rutte 2006, Dudley *et al.* 2005, UNESCO 2006, Mallarach and Papayannis 2007). At the same time, sacred sites face ongoing degradation and loss (Malhotra *et al.* 2001 in Gokhale 2003), although this is less well-documented. As such, their

degradation implies a further loss of their natural and cultural heritage. Furthermore, the link between people and nature at sacred natural sites can be seriously damaged if the sites are degraded. Increasing efforts are being made to reduce the alarming loss of biodiversity through, for example, the CBD 2010 biodiversity target, which is now a recognised target under Millennium Development Goal 7. At the same time, efforts to conserve aspects of human culture both tangible (e.g. historic buildings, temples, cathedrals and mosques) and intangible (e.g. languages, customs, spiritual values, songs and dances) are being undertaken through, for example, the World Heritage Convention (1972) and the Living Heritage Convention (2003). The recognition of 'cultural services' along with provisioning and regulating services in the Millennium Ecosystem Assessment (2005) highlights the importance of nature to human cultures. The effective conservation of sacred natural sites provides a potential strategy for the conservation of both nature and culture; if these sites were completely lost, it would represent an incomparable tragedy for humankind.

Models for a new Human-Earth relationship

It is now recognised by the scientific community, and increasingly by some sectors within political leaderships, that the current pattern of development cannot be sustained. For example, humanity's footprint is 21.9 ha/person, while the Earth's biological capacity is, on average, only 15.7 ha/person: the ultimate re-

sult can only be net environmental degradation and loss (UNEP 2007). For the footprint of humanity to be brought back within the Earth's productive capacity, a new Human-Earth relationship is urgently needed (Brown and Garver 2009). Sacred natural sites provide important insights that may enable society at large to understand how some human communities have lived in ways that have deeply respected nature. Often, these same communities have faced considerable challenges in their efforts to continue to follow these ways of life (see, for example, the paper on the San Francisco Peaks pp. 47-60). These lessons from alternative cultural and developmental models will assist in promoting a renewed and sustainable relationship between people and the planet.

Until now, our global economic model presumes that the human economy is the major system and that human society and the environment are looked after if and when a society (governed largely by economists) can seemingly afford it (image in p. 206). Expressed in extreme terms, our dominant economic view reduces animals, plants, places and people to different types of capital or units of production. In actual fact, however, the human economy is a subset of human society which is itself a subset of our environment and ecology. Brown and Garver (2009) share this view, which they persuasively express as follows.

"The current system operates on the assumption that the earth's environment is a subset of the human economy, and that the earth belongs to humans. If these are the assumptions, it makes sense to transfer as much of the earth's natural

capital as possible into the engines of the industrial economy. These assumptions, though, are fantastically at odds with scientific reality; human culture and its economic goals are, in pure scientific fact, a subset of the earth's environment and resources, and humanity is only one of millions of species that depend on them." (Brown and Garver 2009).

Many traditional societies around the world recognise this actual 'natural order' or right relationship between the human economy and natural systems, and can provide models for a return to a right relationship. To take two examples from Mongolia and Australia respectively which are included as case studies in the guidelines (Wild and McLeod 2008): in Mongolia, President Nambaryn Enkhbayar has shown national leadership by supporting the restitution and renewal of many sacred sites and efforts to renew the Mongolians' traditionally profound respect of nature. Regarding community and the economy, he has written:

"In Eastern societies, especially in societies where nomadic culture is still alive and very much enriched by Buddhist culture, one can find very strong community feeling. It is interesting for us to approach the question of a link between Buddhist philosophy and economics from this point of view, because economics could be explained as a science which deals with how human beings can live better in communities." Enkhbayar (2003).

Mongolia is in the process of restituting its large number of sacred natural sites that have been neglected, overexploited and even abused for much of the last century (UNESCO 2007). In the second

example, the Yolngu people of Northern Australia have played a leadership role in the recovery of Aboriginal land rights, and are increasingly reorienting management to a traditional world view – which makes no distinction between spiritual values and the environment (Verschu-

uren *et al.* pp. 27-45) – through the Dhimurru Indigenous Protected area. Since the concept of Indigenous Protected Areas was first championed in the early 1990s, over 23 declared Indigenous Protected Areas have been established, covering close to 17 million ha or 23 per

Human economic system

Figure 1a.
The 'Current Order'
The current power relationship between the economic social and ecological systems; Ecosystems and human societies are treated as sub-systems of national economies, leading to the discounting and undervaluation of communities and nature.

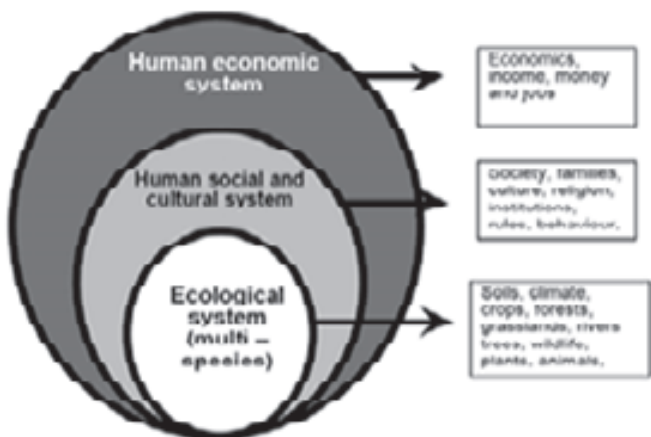
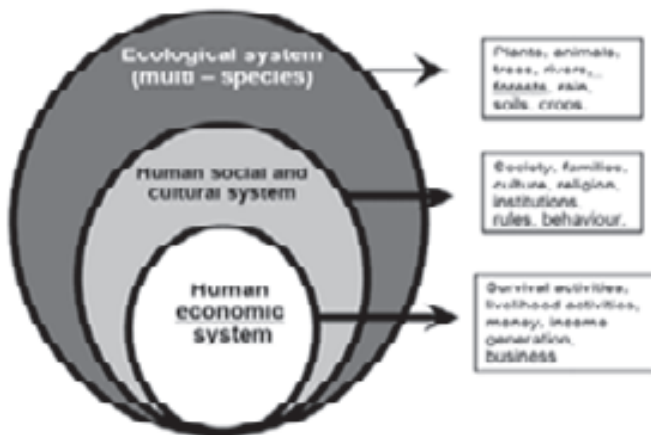


Figure 1b
The 'Natural Order'
Actual relationship between ecological, social and economic systems.

Ecosystems are the encompassing systems in which societies of the human species and the sub-system of the human economy are embedded. Economy should only serve human society and vice for ecosystems.



The relationships between the ecological, social and economic system.

cent of the National Reserve System (Australian Department of the Environment and Water Resources 2007).

Protected areas and communities

Since the late 19th century, many nations have established legally protected areas. Currently, these cover over 12% of the global land area (Chape *et al.* 2005). With the widespread adoption of the 'Yellowstone model' of national park which typically excludes and even evicts indigenous and local communities, protected area agencies have largely overlooked or ignored the sacred natural sites established by these same communities which existed, in many cases, for hundreds, if not thousands, of years prior to the establishment of modern protected areas. The world views held by dominant socio-political entities have often discounted indigenous sacred values. These world views include scientific, materialist, socialist and certain groupings within some mainstream faiths. As a result of these dominant world views, protected area agencies within many socio-political and national contexts across the globe have not taken account of the sacred natural sites of both indigenous peoples and mainstream faiths. In the worst cases, protected area establishment has been used as a tool for the repression of minorities (West and Brechin 1991, Stevens 1997). Restricting the access to and use / management of these sites by their traditional custodians, has disconnected communities from their history, culture and landscape (San Francisco Peaks, this

volume). The promotion of the international and national benefits of protected areas at the cost of local communities has led to deep conflicts between protected area agencies and communities; conflicts which have threatened the status –and, in some cases, even the existence– of some protected areas. The exclusion of cattle from Lake Mburo National Park, Uganda, for example, led to this last relic of the ancestral pastoralist landscape becoming meaningless to the pastoralists themselves (Infield *et al.* 2008). The Akagera National Park in Rwanda was reduced in size by 70% following the 1994 genocide to accommodate returning pastoralists from a similar ethnic group to those at Lake Mburo (Kanyambiwa 1998, Plumptre *et al.* 2001); this lack of meaning for a cattle-free landscape is likely to have contributed to a lack of support for Akagera National Park itself.

The last thirty years have, however, seen a paradigm shift in the management and establishment of protected areas, as well as a reconsideration of the concept of protected landscapes (Phillips 2003, Borrini-Feyerabend *et al.* 2004, Brown *et al.* 2007, Mallarach 2008). As such, increasing attention has been paid to improving the livelihoods of communities associated with protected areas and to involving them in the management of these protected areas. Also, the re-examination of the role of communities in protected areas has shown that one of the main reasons these indigenous local communities have protected nature was to preserve the sacred values, which they recognised, of areas of high biodiversity.

Faith and nature

The greater acknowledgement of indigenous and local communities as potential partners in protected area management, coupled with a greater understanding of the significant biodiversity that sacred natural sites often support, has led to a re-evaluation of the contribution that sacred sites can make to the conservation of nature. The last ten years has seen an increasing volume of literature and conservation work focused largely on the sacred natural sites established by indigenous people and local communities (Ramakrishnan *et al.* 1998, Harmon and Putney 2003, Bhagwat and Rutte 2006, UNESCO 2006). At the same time, sacred natural sites are not the exclusive purview of the faith traditions of indigenous and local communities. Nearly all the 11 mainstream faiths¹ also have well-established sacred natural sites (Dudley *et al.* 2005, Mallarach and Papayannis 2007).

Despite the existence of sacred natural sites associated with mainstream faiths, the nature ethics of many of these faiths have been largely ignored or forgotten. During the 20th century, the rise of Communism in Eastern Europe and Asia and secularism in the West has fuelled a decline in the influence of mainstream faiths in many areas. In the Soviet Union, Eastern Europe, Mongolia and China suppression – sometimes violent – has shattered long-established faiths, some with extensive sacred sites many of which were also damaged. Likewise, religion in the largely secular West now exerts less

of a hold over communities. Of late, there has been a rediscovery of the nature ethics of the mainstream faiths. A dialogue between representatives of the mainstream faiths and conservationists (primarily the WWF and the Alliance of Religion and Conservation), which started in Assisi in 1986 has led to a renewed interest in the environmental ethics contained within all mainstream faiths, and led to declarations on nature and ecology by 11 mainstream faiths (Palmer and Finaly 2003).

It should be noted that in some sacred natural site situations the distinctions between indigenous, local and mainstream spiritual traditions can be rather blurred as multiple groups share the same sacred natural site, and there is often a layering with later spiritual traditions adopting many of the elements of earlier traditions or existing alongside them and accommodating them in local practice (for an example from Sri Lanka, see Wickramasinghe 2003, 2005).

Culture, religion and development

As a rule, development efforts since World War II have taken little consideration of culture or religion. The main presumption has been that Western-style development is superior to other development models, and that other cultures constitute a block to development (Eade 2002). While there has been increasing consideration of cultural aspects of development in recent years, discussions of spirituality have largely remained a development taboo (Ver Beek 2002).

¹ As identified by the Alliance for Religion and Conservation.

There is a small but increasing awareness, however, that development anchored in the culture and norms of individual societies is more likely to be sustainable (Verhelst and Tyndale 2002). At the same time, the global impact of the unsustainable overuse and consumption of resources engendered by materialist industrial societies following the Western development model can no longer be ignored. The current impact of human activity on the natural world indicates that many ecosystems are being heavily over-used, and that some components (e.g. global fisheries) are in the process of collapse (Millennium Ecosystem Assessment 2005). This has led to the realisation of the need to come up with a new development model.

A new vision for protected areas and sacred natural sites

One element of a new model might be the greater integration of natural and cultural values in protected areas. The vision of sacred natural sites and legal

protected areas operating in concert is closer to a reality than ever before. Harmonisation of the management of protected areas and sacred natural sites can be achieved by two main routes:

- Sympathetic and supportive management within protected areas: The adoption of community supportive management of sacred sites within government-protected areas; and
- Recognition and support outside protected areas: The sympathetic recognition and support of sacred sites lying beyond government-protected area boundaries.

Maintaining custodian autonomy

Achieving this vision requires not only the free, prior, and informed consent of custodians, but also maintaining or enhancing the autonomy of site custodians. At the international level, the recognition of Indigenous and Community Conserved Areas (ICCA) is a significant step in this direction (Dudley 2008). At

Mua Headman and Gule dancers at their sacred grove, Gule Wamkule, a UNESCO Masterpiece of Oral and Intangible Heritage of Humanity



the national level, many protected area authorities have not fully embraced the new protected area paradigm, and their failure to recognise community claims on sites within existing protected areas and their involvement in sacred natural sites outside protected areas are likely to undermine custodian independence. A careful situation analysis is therefore required before action is taken to harmonise protected areas with sacred natural sites within them or nearby.

Extent of the challenge

Neither the total number of sacred natural sites is known nor the number now within the 12% of land contained within legal protected areas. It has been estimated, however, that there are between 150-200,000 sacred groves in India alone (Gokhale 2003, Chatterjee *et al.* 2004), while there are an estimated 1,900 sacred groves in Ghana and some 800 sacred natural sites in Mongolia. Of course, several countries will have just one or two; if one accepts the lower figure for India and an estimated average of 500 sacred natural sites for the remaining 191 countries on the UN list of recognised nations, this would give a speculative global estimate in the region of a quarter of a million sacred natural sites – though this figure would, of course, require further research to validate. While many of these sites are small, some are quite extensive. However, since many have already been incorporated into legal protected areas, it is possible that they may not contribute a substantial additional area of land under conservation management. Still, the importance of even

small habitat patches for biodiversity conservation is now recognised, and long periods of minimal disturbance means that sacred natural sites outside protected areas have significant local biodiversity values, especially when they represent the remnants of more widespread vegetation.

Sacred natural sites – guidelines for protected areas managers

Turning to the guidelines themselves, which evolved 2003-2008. Over 50 case studies on sacred natural sites have been presented at meetings organised by UNESCO, the IUCN or collaborating institutions. Specifically, these meetings have been held in India (Ramakrishnan *et al.* 1998), China (UNESCO 2003), Mexico (Pumarejo and Berges 2005) Japan (UNESCO 2006), Spain (Mallarach and Papayannis, 2007), Mongolia (UNESCO 2007), Greece (Papayannis and Mallarach, this volume) and the UK. Other related work has also been referred to, particularly the important recent work from the WWF and ARC relating to protected areas including the report “Beyond Belief: Linking faiths and protected areas to support biodiversity conservation” (Dudley *et al.* 2005) as well as their earlier efforts relating to faith and nature (Edwards and Palmer 1997, Palmer and Finlay 2003).

Also of relevance to sacred natural sites is the large body of work on common property resource management (Ostrom *et al.* 2002) and the collaborative management of protected areas (Borrini-Feyerabend *et al.* 2004), as well as the recent recognition of Indigenous and Com-

munity Conserved Areas - ICCA (Dudley 2008) as a legitimate form of protected area governance which, as mentioned above, is a reflection of the new lessons learnt from both these spheres.

The original focus of the IUCN-UNESCO guidelines was the sacred natural sites of indigenous and local communities, and this remains their primary scope. Some indigenous people have such a close relationship with their sacred natural sites that the deterioration or destruction of those sites threatens their very existence. In addition, sacred natural sites related to indigenous and local communities are, in general, more vulnerable and under greater threat than sacred natural sites associated with mainstream faiths. During the drafting process, however, it was recognised that mainstream faiths care for many sacred natural sites and have teachings relating to the relationship between humans and nature, and efforts were made to incorporate the experiences of the mainstream faiths into the guidelines (to some extent), while retaining the focus on local communities and indigenous people.

The Delos Initiative of the IUCN WCPA Specialist Group on Cultural and Spiritual Values of Protected Areas has engaged with the task of analysing and understanding the diversity of sacred natural sites related to mainstream faiths to which the majority of humankind are related in one way or another. It has made significant steps in this regard, particularly in technologically-developed countries (see Mallarach and Papayannis 2007 and Papayannis and Mallarach this volume for the Montserrat (2006) and Ouranoupolis (2007) statements).

The recommendations of Dudley *et al.* (2005) with regard to the IUCN-UNESCO working guidelines (UNESCO 2007) clearly suggested that:

- The current guidelines are useful but remain general;
- The guidelines should be based on a 'learning portfolio' of protected areas containing sacred sites.

As published, the guidelines (Wild and McLeod 2008) aimed to take these comments into account. It is envisaged that the experience of applying these guidelines will be reviewed in a number of years, when the guidelines will be modified as required.

Guidelines audience

The guidelines are provided primarily to assist protected area managers, especially those concerned with sacred sites located within the boundaries of their legally-established protected areas. Recognising the primacy of traditional custodians in managing their sites, it would be inappropriate for IUCN or UNESCO to provide management advice regarding sacred sites for which custodians have successfully cared for many generations. It is anticipated that the guidelines will promote cooperation between protected area managers and custodians of sacred sites with a view to the enhanced conservation of these special places. While managers of protected areas are the guidelines' main focus, it is hoped that they will be of use to a wider group of stakeholders. The guidelines are thus aimed at:



Rangers and co-workers of Dhimurru Indigenous PA, Australia and Director General of IUCN launching the IUCN Sacred Natural Sites Guidelines, during the World Conservation Congress in Barcelona

- Managers of individual protected areas with sacred natural sites located either within them or nearby;
- Managers of protected area systems who have sacred natural sites within or in the sphere of influence of their network of protected areas; and
- Natural resource ministries responsible for protected area agencies and systems.
- Other custodians, governments and biological or cultural support organisations that wish to support the conservation of sacred natural sites.

Other stakeholders that may find these guidelines useful include:

- Planning authorities responsible for land-use planning outside protected areas;
- Traditional custodians who wish to engage with environmental or protected area authorities to increase the protection of their sacred sites and are either seeking or offering advice on ecological management;
- NGOs and other agencies that provide support for the custodians of sacred natural sites;

The managers of protected areas were at the centre point of discussion when developing these guidelines. In terms of flow, the guidelines develop from the specific to the more general, from the local to the national level. For some of the broader and national level issues, the main role of site managers will be to advocate for policy changes based on the experiences in their individual protected areas.

It is also recognised that 'technical guidelines' and 'best practice' themselves stem from a Western, scientific, reductionist conservation culture (MacDonald 2004), and that attempting to marry these with the holistic and traditional-knowledge based cultures represented at sacred natural sites is ambitious. Increasingly, however, protected area managers are willing to learn from the experience of traditional custodians, while custodians of sacred

natural sites have begun requesting advice from ecologists regarding the environmental management of their sacred natural sites. A good example of this is the Both Ways programme of the Dhimurru Protected Area in Northern Australia (Verschuuren *et al.* pp. 27-45).

Format of the guidelines

The guidelines consist of 44 points (presented separately in Annex I for ease of appreciation) arranged under six guiding principles to which the remainder of this paper refers. The six principles of the core guidelines are:

1. Recognition ((5 guidelines)
2. Planning (11 guidelines)
3. Participation (5 guidelines)
4. Knowledge and understanding (8 guidelines)
5. Management (10 guidelines)
6. Rights (5 guidelines)

Brief outline of the six principles

1. Recognition

This section (five guidelines) discusses the important element of recognition. Appropriate recognition and support by governments and other stakeholders is a critical step in the conservation of sacred natural sites. The free, prior and informed consent of custodians is of the utmost importance. It also discusses the recognition of sacred natural sites as archetypal models of relationships between Man and Nature.

2. Planning

The second principle addresses planning. This cluster contains 11 guidelines

concerning aspects of protected area management, planning and zoning (including buffer and support zones).

One of the most challenging issues facing the improved conservation of sacred natural sites is secrecy versus publicity. In some cases, the sacred values are predicated upon the site being kept confidential from non-community, and sometimes certain community, members. Publicising sacred sites in this context may lead to the unwanted attention of treasure hunters, tourists in search of indigenous rites, 'new age' celebrants seeking a closer relationship with nature and agents of proselytising faiths seeking converts. In contexts where secrecy is not an issue, biodiversity inventory and research has led to greater publicity and conservation. In the case of the Kaya sacred forests on the coast of Kenya, for example, it has led to their official recognition as national monuments and, in 2007, their inclusion on the World Heritage Register (Githitho 2003, 2006). In some countries, the protected area agencies appear to lack the sensitivity to effectively recognise sacred natural sites. Incorporating them in protected areas systems may well thus be counter productive.

3. Participation

This principle (5 guidelines) refers to the important issues of voluntary participation, stakeholder inclusion, conflict resolution and legitimacy. While participation is now well-established as conservation practice, it has to be continually re-learned, with the ideal end point being community empowerment and site management. Government institutions, in particular, are

often poor at participatory decision-making, especially at a national policy level. In some countries however, protected area agencies use innovative contract and indigenous park models.

4. Knowledge and understanding

This section deals with a wide range of issues dealing with the knowledge and understanding of sacred natural sites. Sensitive issues here include making sure custodians are not forced to reveal knowledge about their sacred sites, especially during the collecting of inventory data, and the need to ensure that multi-disciplinary teams are involved in the research.

5. Management

Principle five covers a wide range of management issues ranging from access and tourism to the protection —and, where appropriate, the financing— of sacred natural sites. Financing sacred sites is a sensitive issue, and some have argued against this guideline being included at all. It is, however, a critical issue in the survival of sacred natural sites, especially in

those contexts where poverty and population pressure give rise to livelihood needs and changes in community values which bring with them significant new pressures.

6. Respect of rights

The final principle addresses overall rights and an equity-based approach, including freedom of religion, and includes issues ranging from institutional analysis and rights-based approaches to tenure. Rights and tenure issues are often contested areas, especially by indigenous peoples. The recent UN Declaration of the rights of indigenous peoples is a welcome step in that direction (UN 2007).

Comments are invited on the guidelines

The guidelines were published in 2008. Having been tested in a number of representative protected areas worldwide, they will be reviewed again in four years time. Any contribution to testing the guidelines is welcome, and relevant information should be forwarded to the editors.

Indigenous Ranger Marlangaj Yunupingu presents Julia Marton-Lefèvre with a Yidaki at the launch of the Sacred Natural Sites Guidelines, during the World Conservation Congress in Barcelona



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Annex 1

Principle and Guidelines for the Management of Sacred Natural Sites located in Legally Recognised Protected Areas: Section 4 of: Wild, R.G. and McLeod, C. (eds.). 2008, Sacred Natural Sites: Guidelines for Protected Area Managers. IUCN-UNESCO. IUCN Best Practice Guidelines 16: IUCN Gland.

Principles and Guidelines for the Management of Sacred Natural Sites Located in Legally Recognised Protected Areas

A working version of the guidelines (7 pages) was published in 2006¹² and has also been available on the internet since then. The present version builds upon the initial concepts and incorporates feedback received regarding the working version. It is envisaged that the current guidelines will be tested in field situations and will be reviewed and revised over the next four years.

In their current form, the guidelines are relatively detailed and prescriptive. The 44 guidance points are grouped into six principles. In terms of flow, they generally develop from the specific and local to the more general and national level. In relation to some of the guidelines at the regional or national scale, it is recommended that individual protected area managers advocate for appropriate, relevant policy changes that will improve management of sacred natural sites locally, nationally and globally.

1 Principles

- Principle 1 Recognise sacred natural sites already located in protected areas.
- Principle 2 Integrate sacred natural sites located in protected areas into planning processes and management programmes.
- Principle 3 Promote stakeholder consent, participation, inclusion and collaboration.
- Principle 4 Encourage improved knowledge and understanding of sacred natural sites.
- Principle 5 Protect sacred natural sites while providing appropriate management access and use.
- Principle 6 Respect the rights of sacred natural site custodians within an appropriate framework of national policy.

2 Guidelines

Principle 1: Recognise sacred natural sites already located in protected areas.

Guideline 1.1 Natural and cultural values: Recognise that sacred natural sites are of vital importance to the safeguarding of natural and cultural values for current and future generations.

2 UNESCO, 2006, pp. 326–331

- Guideline 1.2 Ecosystem services and human well-being: Recognise that sacred natural sites have great significance for the spiritual well-being of many people and that cultural and spiritual inspiration are part of the ecosystem services that nature provides.
- Guideline 1.3 Recognition: Initiate policies that formally recognise the existence of sacred natural sites within or near government or private protected areas and affirm the rights of traditional custodians to access and play an appropriate, ideally key, role in managing sacred natural sites now located within formal protected areas.
- Guideline 1.4 Consultation: Include the appropriate traditional cultural custodians, practitioners and leaders in all discussions and seek their consent regarding the recognition and management of sacred natural sites within or near protected areas.
- Guideline 1.5 Holistic models: Recognise that sacred natural sites integrate social, cultural, environmental and economic values into holistic management models that are part of the tangible and intangible heritage of humankind.

Principle 2: Integrate sacred natural sites located in protected areas into planning processes and management programmes.

- Guideline 2.1 Park planning: Initiate planning processes to revise management plans to include the management of sacred natural sites located inside protected area boundaries.
- Guideline 2.2 Identify sacred natural sites: Where secrecy is not an issue and in close collaboration and respecting the rights of traditional custodians, identify the location, nature, use and governance arrangements of sacred sites within and around protected areas as part of a participatory management planning process.
- Guideline 2.3 Respect confidentiality: Ensure that pressure is not exerted on custodians to reveal the location or other information about sacred natural sites and, whenever requested, establish mechanisms to safeguard confidential information shared with protected area agencies.
- Guideline 2.4 Demarcate or conceal: Where appropriate and to enhance protection, either clearly demarcate specific sacred natural sites, or alternatively, to respect the need for secrecy, locate sacred natural sites within larger strictly protected zones so exact locations remain confidential.
- Guideline 2.5 Zoning: Establish support, buffer and transition zones around and near sacred sites, especially those that are vulnerable to adverse external impacts.
- Guideline 2.6 Linkages and restoration: Create ecological corridors between sacred natural sites and other suitable areas of similar ecology for connectivity, and in degraded landscapes consider restoring sacred natural sites as an important initial step to reviving a wider area.

- Guideline 2.7 Ecosystem approach: Adopt the ecosystem approach as the key strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way and also includes cultural and spiritual values.
- Guideline 2.8 Landscape approach: Take a landscape approach to sacred natural sites, recognising their role in wider cultural landscapes, protected area systems, ecological corridors and other land uses.
- Guideline 2.9 Support development planning recognition: Development planning authorities are the main planners of land use in areas outside many protected area systems. Seek their and other stake-holders' support for the recognition of sacred natural sites in the wider countryside.
- Guideline 2.10 Protected area categories and governance: Recognise that sacred natural sites exist in all of the IUCN protected area categories and governance types, and that those that fall outside formal protected area systems can be recognised and supported through different legal and traditional mechanisms according to the desires of their custodians, including as community conserved areas when appropriate.
- Guideline 2.11 International dimension: Recognise that some sacred natural sites, and the cultures that hold them sacred, cross international boundaries and that some may be within or may surround existing or potential trans-boundary peace parks.

Principle 3: Promote stakeholder consent, participation, inclusion and collaboration.

- Guideline 3.1 Prior consent: Ascertain the free, prior and informed consent of appropriate custodians before including sacred natural sites within new formal protected areas and protected area systems and when developing management policies affecting sacred places.
- Guideline 3.2 Voluntary participation: Ensure that state or other stakeholder involvement in the management of sacred natural sites is with the consent and voluntary participation of appropriate custodians.
- Guideline 3.3 Inclusion: Make all efforts to ensure the full inclusion of all relevant custodians and key stake-holders, including marginalized parties, in decision making about sacred natural sites, and carefully define the processes for such decision making, including those related to higher level and national level policies.
- Guideline 3.4 Legitimacy: Recognise that different individuals and groups have different levels of legitimacy and authority in decision making about sacred natural sites.
- Guideline 3.5 Conflict management: Where relevant and appropriate, use conflict management, mediation and resolution methods to promote mutual

understanding between traditional custodians and more recent occupants, resource users and managers.

Principle 4: Encourage improved knowledge and understanding of sacred natural sites.

- Guideline 4.1 Multidisciplinary approach: Promote a multidisciplinary and integrated approach to the management of sacred natural sites calling on, for example, local elders, religious and spiritual leaders, local communities, protected area managers, natural and social scientists, artists, non-governmental organizations, and the private sector.
- Guideline 4.2 Integrated research: Develop an integrated biological and social research programme that studies biodiversity values, assesses the contribution of sacred natural sites to biodiversity conservation, and understands the social dimension, especially how culturally rooted behaviour has conserved biodiversity.
- Guideline 4.3 Traditional knowledge: Consistent with article 8(j) of the Convention on Biological Diversity (CBD), support the respect, preservation, maintenance and use of the traditional knowledge, innovations and practices of indigenous and local communities specifically regarding sacred natural sites.
- Guideline 4.4 Networking: Facilitate the meeting of, and sharing of information between, traditional custodians of sacred natural sites, their supporters, protected area managers and more recent occupants and users.
- Guideline 4.5 Communication and public awareness: Develop supportive communication, education and public awareness programmes and accommodate and integrate different ways of knowing, expression and appreciation in the development of policies and educational materials regarding the protection and management of sacred natural sites.
- Guideline 4.6 Inventories: Subject to the free, prior and informed consent of custodians, especially of vulnerable sites and consistent with the need for secrecy in specific cases, carry out regional, national and international inventories of sacred natural sites and support the inclusion of relevant information in the UN World Database on Protected Areas. Develop mechanisms for safeguarding information intended for limited distribution.
- Guideline 4.7 Cultural renewal: Recognise the role of sacred natural sites in maintaining and revitalizing the tangible and intangible heritage of local cultures, their diverse cultural expressions and the environmental ethics of indigenous, local and mainstream spiritual traditions.
- Guideline 4.8 Intercultural dialogue: Promote intercultural dialogue through the medium of sacred natural sites in efforts to build mutual understanding, respect, tolerance, reconciliation and peace.

Principle 5: Protect sacred natural sites while providing appropriate management access and use.

- Guideline 5.1 Access and use: Develop appropriate policies and practices that respect traditional custodian access and use, where sacred natural sites fall within formal protected areas.
- Guideline 5.2 Visitor pressures: Understand and manage visitor pressures and develop appropriate policies, rules, codes of conduct, facilities and practices for visitor access to sacred sites, making special provisions for pressures brought about by pilgrimages and other seasonal variations in usage.
- Guideline 5.3 Dialogue and respect: Encourage ongoing dialogue among the relevant spiritual traditions, community leaders and recreational users to control inappropriate use of sacred natural sites through both protected area regulations and public education programmes that promote respect for diverse cultural values.
- Guideline 5.4 Tourism: Well managed, responsible tourism provides the potential for economic benefits to indigenous and local communities, but tourism activities must be culturally appropriate, respectful and guided by the value systems of custodian communities. Wherever possible, support tourism enterprises that are owned and operated by indigenous and local communities, provided they have a proven record of environmental and cultural sensitivity.
- Guideline 5.5 Decision-making control: Strong efforts should be made to ensure that custodians of sacred natural sites retain decision-making control over tourist and other activities within such sites, and that checks and balances are instituted to reduce damaging economic and other pressures from protected area programmes.
- Guideline 5.6 Cultural use: While ensuring that use is sustainable, do not impose unnecessary controls on the careful harvest or use of culturally significant animals and plants from within sacred natural sites. Base decisions on joint resources assessments and consensus decision making.
- Guideline 5.7 Protection: Enhance the protection of sacred natural sites by identifying, researching, managing and mitigating overuse, sources of pollution, natural disasters, and the effects of climate change and other socially derived threats, such as vandalism and theft. Develop disaster management plans for unpredictable natural and human caused events.
- Guideline 5.8 Desecrations and re-sanctifying: Safeguard against the unintended or deliberate desecration of sacred natural sites and promote the recovery, regeneration and re-sanctifying of damaged sites where appropriate.

- Guideline 5.9 Development pressures: Apply integrated environmental and social impact assessment procedures for developments affecting sacred natural sites and in the case of the land of indigenous and local communities support the application of the Convention on Biological Diversity's Akw: Kon Guidelines for minimizing the impacts of development actions.
- Guideline 5.10 Financing: Where appropriate, pay due attention to the suitable financing of sacred natural site management and protection, and develop mechanisms for generating and sharing revenue that take into account considerations of transparency, ethics, equity and sustainability. Recognise that in many parts of the world poverty is a cause of the degradation of sacred natural sites.

Principle 6: Respect the rights of sacred natural site custodians within an appropriate frame- work of national policy.

- Guideline 6.1 Institutional analysis: Understand traditional management institutions and enable and strengthen the continued management of sacred natural sites by these institutions. Make appropriate arrangements for the adoption and management of sacred natural sites that have no current custodians, for example by heritage agencies.
- Guideline 6.2 Legal protection: Advocate for legal, policy and management changes that reduce human and natural threats to sacred natural sites, especially those not protected within national protected areas and other land planning frameworks.
- Guideline 6.3 Rights-based approach: Root the management of sacred natural sites in a rights-based approach respecting basic human rights, rights to freedom of religion and worship, and to self- development, self-govern- ment and self-determination as appropriate.
- Guideline 6.4 Confirm custodians' rights: Support the recognition, within the overall national protected area framework, of the rights of custodians to their autonomous control and management of their sacred sites and guard against the imposition of conflicting dominant values.
- Guideline 6.5 Tenure: Where sacred natural sites have been incorporated within gov- ernment or private protected areas in ways that have affected the ten- ure rights of their custodians, explore options for the devolution of such rights and for their long-term tenure security.



Sacred natural sites in developed countries

Thymio Papayannis

Sacred natural sites

Sacred sites served as the world's oldest method of nature protection, conserving habitats and landscapes long before the establishment of modern legally-protected areas. Although no systematic inventory has been made of these sites, it is estimated that there are roughly the same number of sacred sights in the world as there are official protected areas – in India alone, for example, there are over 100,000 sacred groves (Dudley *et al.* 2005).

Despite modernisation, most technologically developed countries have maintained a high level of biodiversity and large expanses of natural areas. This is perhaps due to the low population densities in large parts of big countries like Austral-

ia, Canada, Russia and the US. In smaller countries like Japan and most European nations where the population density is considerably higher, only a limited number of natural areas have been preserved, and these through appropriate policies and active management, in the main.

Most of the inhabitants of technologically developed countries are either agnostic or adhere to mainstream faiths. Most of the developed countries of the 'New World' still harbour remnants of their indigenous populations, many of which maintain their traditional customs and beliefs – examples would include the Aboriginal peoples of Australia, the Inuit in Canada and Alaska, the Saami people in Scandinavia, remnants of Native Americans in the US and a large number of indigenous people in Russian Siberia.

In addition, immigrants leaving their own countries for economic or political reasons have introduced their religions and beliefs into their developed host countries, creating cultural and religious 'pockets' which can be concentrated in major urban centres or geographically dispersed. Almost all of these spiritual manifestations are related to specific places which have a sacred character for the believers, but which are also often recognised and respected by members of other faiths and the agnostic. Some of these sacred places maintain a high degree of biodiversity.

Within the framework of the Delos Initiative, all areas that merit a nature protection status —on a local, national or international level— are considered protected areas¹, even if this protection status has not yet been legally confirmed in some cases². The focus is thus on areas that are recognised as sacred by a mainstream religion or in accordance with indigenous beliefs and which are of value because of their natural heritage values (which include biodiversity, geodiversity and ecosystems).

Mainstream religions

In developed countries, many of the major religious establishments (such as archdioceses, sees and the Vatican itself) are based in large urban centres.

1 According to the Convention on Biological Diversity, a protected area is defined as "a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives".

2 As in the case of the Chrysopigi Monastery on Crete and the Holy Island of Arran in Scotland.

Traditionally, however, both Christian and Buddhist monasteries have been established in remote natural areas which provide the monastic communities with a refuge from secular life and allow them to focus on spiritual concerns. Monasteries are usually located in mountainous areas with forest cover, many of which have now been granted protection status; Mt Athos, for instance, with its 20 monasteries is a World Heritage Site.

The same is true of hermitages which, being even more remote and inaccessible, tend to be still more deeply embedded in protected areas. Examples would include the Agia Paraskevi monastery and related hermitages overhanging the Voidomatis Gorge in Pindos in Eastern Greece, the scetes of Valaam Island in the Karelia region of the Russian Federation and even the Pelgye Ling Gompa Monastery built around Milarepa's cave in Tibet.

Small religious buildings are also found in remote mountainous areas. Examples would include the chapels dedicated to the Prophet Elijah (Profitis Ilias) atop high hills and mountains throughout the Greek mainland and islands, as well as the numerous Romanesque chapels devoted to St Michael in the Pyrenees.

Pilgrimage routes such as the Via Lauretana in Italy, the ways to St James (Santiago) de Compostela in Southern France and Northern Spain and the routes in Japan's Kii mountain range are often related to or run through protected natural areas.

Indigenous sites

While mainstream religions often express the sacredness of a place through the



Loreto Hill Sanctuary and the Santa Casas olive grove, Scossicci, Italy

construction of religious edifices, for indigenous peoples sacredness is inherent in nature and in its elements (Possey 1999) and is made manifest in mountains, lakes and rivers but also in individual rocks, trees and animals. There are also sacred aspects to transient climatic events or the perennial movement of the sun, moon and stars. Indigenous beliefs are thus very closely related to nature; however, because they do not leave large-scale, profound and permanent marks on nature, they are hard to define and hence to protect. Compared to the impressive monuments left by major indigenous civilisations in Central and South America, Asia and Africa, the Aborigine peoples of Australia, the Native Americans of the US and Inuits of Canada and Greenland have left light imprints on the earth. Moreover, the sanctity and right to respect and protection of these sites are frequently contested – as in the well-known case of the San Francisco Peaks in Arizona³.

3 See pp. 47-60.

Current trends

Sacred natural sites must be viewed within a broader context of the global social, cultural and economic developments which can come together to transform or maintain the spiritual character of a given place or community (Palmer and Finlay 2003).

One such major development is the spread of multiculturalism in developed countries. To a large extent, this is due to a large increase in immigration – mainly, but not only, from poorer developing countries – which is expected to grow even more rapidly in the years to come due to the inevitable repercussions of population growth, climate change and the global economic crisis. A considerable percentage of these economic and environmental immigrants are not absorbed into the social web of their host countries, but tend to gravitate instead towards their own ethnic, cultural or social groups, initially for support, but later on as a way of preserving their ethnic and cu-

ltural identity. There is thus a tendency for these immigrants to retain their cultural and spiritual traditions, including their language; the spread of social liberalism means that this — except in cases where it leads to political unrest — is judged acceptable by the majority of the population.

In these same developed countries, mainstream religions are challenged on a social level by various ideologies and beliefs which capitalise on the distance some of them maintain from contemporary realities, on their conservatism or on their misusing their spiritual mandate to further political aims (as in the case of religious fundamentalism).

In turn, indigenous beliefs within developed countries are usually limited to small minorities. Such minorities are often influenced by proselytising mainstream religions, which leads to a diverse mixture of spiritual currents which may not be conducive to spiritual clarity or to the maintenance of the initial cultural heritage, although it establishes new patterns of heritage and gains high anthropological interest.

Finally, one should take into account the growth of secularism, which is weakening both mainstream faiths and indigenous beliefs. Although a resurgence of spiritual quests after the collapse of materialistic and hedonistic ideologies has been predicted⁴, it is perhaps too early to assess the importance of this trend. Furthermore, it is especially difficult to estimate the long-term impact on spiritual matters of

4 Thus, the resurgence of Orthodox Christianity in former communist countries, from Russia to Albania, is a significant development.

the neoliberal system with all it entails in terms of free markets, excessive consumption and a lack of financial control⁵.

Mainstream religions

If one takes a closer look at mainstream religions, it is reasonable to conclude that they have been stewards of an ancient and rich spiritual and cultural heritage for millennia⁶. Most of these religions have maintained their heritage intact as it is inextricably woven into the fabric of their innermost beliefs. However, a few have modernised their message and practices and come closer to people today.

In the not so distant past, mainstream religions exerted a very powerful social (and political) influence, especially in countries (like Greece⁷, Russia and Italy), which still had a state religion in some form or other. This influence is declining but still substantial, as churches still exert a guiding role in social and political matters for a considerable part of the population. This influence is clearly higher in less technologically developed countries.

The social role of mainstream religions and their structures should be viewed in the light of their effective organisation and the considerable human and financial resources they can mobilise. While there are clearly differences between churches, they are all powerful social forces.

5 This statement was written before the start of the global economic crisis in October 2008.

6 From 1.3 millennia for Islam to 5 millennia for Hinduism.

7 In Greece for example, all clergy are public servants paid by the state.



Hermitage near Skitul Sihra, Vanatory Neamt Monastery, Romania

On the positive side, one must mention the increasing sensitivity of mainstream religions to social challenges including military conflict, genocide, poverty and famine. Seeing themselves as stewards of the Creation⁸, they are also becoming increasingly sensitive to threats, pressures and impacts on the environment, which has led to positive action.

Mainstream religions and the environment

The way in which the major religions have viewed and interpreted the natural environment have changed over time.

The Qur'an, for example, is rich in ecological teachings and provides guidance on carefully managing the earth and its resources. Unfortunately, the Muslim faithful have often ignored these admonitions, and only recently has there been a return to environmental prudence among some followers of Islam.

⁸ As demonstrated by the Venice Declaration signed in 2005 by Pope Jean-Paul II and the Ecumenical Patriarch Bartholomew I.

Buddhism, too, has been particularly sensitive to protecting nature and caring for the natural environment, although this has not improved the living conditions for the inhabitants of the countries where it is practised.

Early Christians displayed a profound ambivalence towards the material world along with suspicion of the natural world (Burton-Christie 2000). Later, following the spread of Protestantism and the advent of mercantilism and, later, the industrial revolution, the accumulation of wealth —and, hence, materialism— were appraised more highly (Weber 2002) and nature less so. Only recently have the three main branches of the Christian Churches reconsidered their interpretation of Man's right to 'conquer the earth', a concept rooted in the anthropocentrism of the European Renaissance, and begun collaborating on a new position whereby any act that degrades or destroys nature —God's Creation— is a sin. This is a good beginning, but concrete actions is now re-

quired to implement this new environmental sensitivity.

Within the present-day context of dwindling natural resources and a burgeoning world population, the lessons of monastic asceticism — as espoused by some of the mainstream religions — are gaining ground. They consist of managing resources — and natural resources, in particular — frugally to avoid excessive consumption, and of living practices that are in harmony with nature. It is these lessons that make contemporary monasticism attractive to many people in today's society, or at least arouses their curiosity.

Indigenous faiths

Indigenous peoples found it extremely difficult to retain their cultural identity after the disastrous impact of colonialism, and homogenisation became widespread through force or social / economic incentives. Economic colonialism is, of course, still a reality in parts of the developing world.

Most indigenous peoples have left a lighter footprint on the earth than their colonisers; and although this could be considered positive, it has made it extremely difficult for indigenous people to indisputable proof their use and ownership of their land and win the right to legally administer and manage it in the face of the pressures and challenges of contemporary development.

Many sacred sites are also under threat due to cultural breakdown and change — modern development, in particular, is endangering both their number and integrity. The protection of indigenous

sites can thus lead to the protection of entire cultural systems and the acknowledgment of these cultures' role in the protection of the environment (Dudley *et al.* 2005).

The situation has not been improved by interventions on the part of public authorities; even when well-meaning, such interventions have often been insensitive and 'paternalistic', undermining the traditional social structures upon which indigenous peoples depend.

Still, progress has been made. A number of indigenous peoples have improved their governance and organisation and acquired useful social skills, including the ability to plead their case and defend their rights. This has led to improved recognition and acceptance, and the winning of legal battles over property rights; these positive developments have, however, been more evident in Australia, Canada, New Zealand and South American countries like Bolivia and Columbia than they have been in Brazil or the USA.

General recommendations

Certain suggestions can be made here in relation to improving the management of sacred natural sites in developed countries.

There is an urgent need to establish an equitable partnership between custodians of sacred sites and the managers of the protected natural areas in which they are often embedded. This partnership should be based on a mutual recognition of the different philosophies (and, perhaps, ideologies) espoused by the two sides and the recognition that they are more often

complementary than conflicting. A pragmatic approach should also be adopted to resolving practical problems in a manner which avoids exclusion and conflict.

Two of the main spheres of conflict between the custodians of sacred sites and the managers of protected natural areas are land ownership and public land use issues: such issues should be resolved fairly and with a degree of broad-mindedness in a spirit of collaboration and joint stewardship. Local communities must also be involved in the process and allowed to protect their own interests, but they must also realise the significant benefits accruing to the existence of sacred natural sites in their vicinity.

That some of these sites have been globally recognised —by being designated a World Heritage, Man and Biosphere or Ramsar site— must also be taken into account, as it places them in a global constituency. Managing the flow of visitors or pilgrims to these sites presents major challenges that require careful and sensitive management.

For mainstream religions

Mainstream religions can only hope to achieve an optimal balance between nature protection and spiritual considerations if they become more interested and involved in ecological matters. Within religious structures, the capacity for understanding environmental problems and participating in their resolution must be deliberately and systematically developed —this is already happening in some monastic communities. Crucial issues concerning ecological justice, responsibility and pru-

dence, as well as the need to respect and protect the environment, should be included in sermons on a regular basis.

On the other side, managers of protected areas must also become sensitive to cultural and spiritual concerns. This is particularly difficult, as most of them have a background in the natural sciences. However, major multilateral organisations devoted to the natural environment (such as the Convention on Biological Diversity and Ramsar) and international conservation organisations (such as the IUCN and WWF⁹) are working to bridge the gap between culture and nature, which will bear fruit in the long run. However, it is clear that much more public awareness work is needed on the national, regional and local levels.

The participation of custodians of sacred sites in the administrative processes of protected areas will help both sides comprehend the issues, identify potential conflicts and work towards joint solutions. These benefits can be magnified still further if sacred site custodians are represented on the management body of the corresponding protected area. This would both equate to recognition of their status as key stakeholders in the area, allow them a better understanding of the issues, and provide a forum for their concerns.

For indigenous faiths

The cultivation among society at large of a profound respect for the spiritual, cultural and practical implications of the sacred sites of indigenous peoples is a

⁹ International Union for the Conservation of Nature and the World Wide Fund for Nature.

sine qua non for their fair treatment. Children must be introduced to the concepts at school level, while their conception should be broadened and deepened throughout their education.

Respect would lead to raised awareness of the need to protect sacred indigenous sites from development pressures and encroachment. It is evident that such considerations must be incorporated into environmental impact assessments at every appropriate level, from projects to policies that may adversely affect indigenous sacred natural sites.

Authorities and organisations responsible for environmental matters —and protected areas management, in particular— must be open-minded with regard to indigenous beliefs and traditions; they should view them as a source of knowledge and not dismiss them as mere superstitions. Indigenous know-how in the sphere of natural resource management —e.g. aboriginal fire management techniques (Szabo and Smyth 2003)— must be viewed on a par with scientific conser-

vation measures. The custodians of indigenous sacred sites could thus be invited to participate in protected areas management bodies on which they could be allotted at least a consultative role, and where the importance of their opinions could be acknowledged during the taking of decisions impacting on the management of their sacred lands (Lee and Schaaf 2003). In exchange, protected area managers should be willing to provide indigenous societies with the necessary tools and scientific / technical knowledge they need to manage their land effectively and in an environmentally sensitive way (Mallarach and Papayannis 2007).

Field experience must be acquired by applying the new Sacred Natural Sites Guidelines for Protected Area Managers, recently published by IUCN (Wild and McLeod 2008). Success between conservation and spirituality can be achieved if local support is given to conservation efforts and effective and trusting partnerships among all stakeholders are developed.

After all, it is our common earth...

Meiji Jingu Shinto shrine in Tokyo, Japan



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Some thoughts on sacred sites, faith communities and indigenous peoples

Gonzalo Oviedo

Many of the problems pertaining to the spiritual systems and practices of indigenous peoples in developed countries also affect indigenous and traditional peoples in developing countries. However, it is important to understand and take into account differences in the scale and complexity of the problems in the context of conservation programmes.

I shall briefly discuss five points before making some recommendations:

1. In many developing countries, indigenous and traditional peoples and cultures are comparatively more numerous and represent a significant proportion of the population. This is a result of many factors, among them history and differing degrees of urbanisation and cultural / economic change. For exam-

ple, the vast majority of indigenous and traditional cultures live in the tropical belt, from which developed countries are virtually absent and where most nations are affected by poverty and low standards of human well-being. From a conservation perspective, the majority of conservation efforts occur in the tropical belt because of the levels of biodiversity present in these regions. On a global scale, we can thus say that the presence of indigenous and traditional peoples and their belief systems and practices in developing countries in the tropics is also comparatively more significant from a conservation perspective than their presence in developed countries in temperate regions.

2. Numbers aside, the situation of indigenous and traditional peoples in de-

veloping countries is generally more difficult and more complex than it is for indigenous and traditional peoples in many developed countries, as the former face greater poverty and increased marginalisation as well as enjoying less of a voice and fewer rights. Of course, this does not mean that indigenous peoples face no problems in developed countries —the grievances of the Aboriginal peoples of Australia, the Maori of New Zealand, the Inuit of Canada and the Dine' in the US confirm that they, too, face major challenges. However, the threat to cultural survival is comparatively greater in developing countries where indigenous and traditional people face a more complex mixture of marginalisation, discrimination, livelihood insecurity, conflict and poverty. Needless to say, this has tremendous implications for the vitality and prospects of traditional spirituality as it interrelates with nature conservation. Of course, every case in which a culture's belief system and practices are facing erosion is cause for concern and a source of stress and suffering for the people in question, and comparisons can only be relative at a global level. It should also be borne in mind that taken individually, despite marginalisation and poverty, some traditional cultures in developing countries may be more vital than other declining indigenous cultures in, for example, the US.

3. One of the fundamental issues that needs to be addressed in the context of sacred sites and indigenous and

traditional peoples in developing countries is the problem of conflict with religious groups and institutions, which can be a far thornier issue than in developed countries and which continues to be highly significant despite certain advances made with regard to religious tolerance and legal and political arrangements that recognise freedom of belief. This problem largely originates in the association between certain religious groups / institutions and colonial powers. Thus, we have the role played by the Catholic church in Spain and Portugal's conquest of the Americas and, in the modern era, the (mostly US-based) evangelical groups of various denominations which employ aggressive strategies to 'convert' indigenous peoples in developing countries to Christianity —the Wycliffe Bible Translators, for instance, who define themselves as 'World Missions for Unreached People Groups' and target isolated indigenous peoples, or the New Tribes Missions, a sect with a similar fundamentalist approach which "plants tribal churches among unreached people groups". The 'missionary' intentions of both the Catholic Church, especially in the past, and the present-day American evangelical sects are grounded in the "extirpation of idolatry" and the "salvation" of indigenous peoples who are believed to be "naturally condemned" because of their "paganism". And while the level of conflict may have diminished in recent years as a result of progressive thinking on the part of various religious communities of various affilia-

tions, it remains a near intractable problem in many places where indigenous and traditional peoples continue to be harassed and persecuted by religious groups and sects, putting tremendous strain on indigenous spirituality and indigenous cultures, and sometimes on these groups' very capacity to survive as cultures.

4. The problem of the loss of rights of tenure and management in relation to sacred sites is extremely complicated, and proposals for restoring these rights need to be examined with great care. The loss of rights began in the colonial era and was, in many cases, accompanied by acts of great violence. If one thinks of the many sacred sites that have been affected by the loss of rights in developing countries, one can only ask oneself how much can be done to repair the damage done. Ethics aside, this remains a monumental question that needs to be addressed in a realistic and pragmatic way which does not raise expectations that may never be met. This poses an especially difficult challenge for the conservation community, since, while we recognise the problem and are supportive of the rights of indigenous and traditional peoples and the need to restore rights and compensate for losses, we also recognise that the issue is more to do with land tenure, politics and governance than with conservation, which limits our capacity to offer advice or urge change. In developed countries, the process of settling land tenure issues in relation to indigenous peoples

has made more progress, with many claims already settled and clearer mechanisms and processes in place, as in the case of Aboriginal territories in Australia and New Zealand and of the Arctic. Conflicts and claims exist, of course, but are comparatively fewer and less intractable than in developing countries.

5. The loss of rights relating to the tenure and management of sacred sites within protected areas, and the potential restitution of these rights, remains an issue with no clear solution in most developing countries, where the legal situation is more difficult than in developed countries. In the case of Europe, for example, the legislation governing protected areas generally allows for tenure rights exercised within the limitations of management regulations. With some exceptions, protected areas legislation in developed countries does not conflict conceptually or philosophically with the tenure rights of the inhabiting communities. In most developed countries, however, sacred site owners have not been disempowered primarily through tenure rights, but rather through insensitive management approaches. In a sense, this makes it easier to find solutions.

In Latin America, Asia and Africa, protected areas legislation does conflict as a rule with local tenure and governance rights. In most countries, the existing legislation governing protected areas explicitly states that all lands within protected areas are state lands, and mandates expropriation when legally-titled private

lands lie within them. Legally speaking, it is therefore impossible under the current systems to restore the rights of indigenous and traditional peoples to their sacred sites or —more broadly— to their lands and territories within protected areas.

So what is to be done? Of course, we believe that protected areas legislation should be amended with regard to this matter, but given that this is not a priority for politicians, change can only come about slowly and on a small scale. So, given that changes are not easy to bring about and may have significant implications for a range of social groups, how can we improve the effectiveness of initiatives geared to promoting legislative change?

Another key issue is the problem of the erosion of traditional institutions. The suppression and oppression of traditional institutions in colonial times, and later through the imposition of class / caste / ethnic politics, has had profound consequences for traditional cultures. There are ongoing political interests in keeping traditional institutions weak —cosmetic façades rather than instruments of real power. We are thus faced once again with a major problem of governance that goes beyond sacred sites or traditional spirituality.

Cultural change, too, especially across generations, is a complex factor which impacts on traditional institutions. While we certainly do not want to promote a rigid approach to cultural and institutional change, as we have to recognise and accept change as part of the dynamic and diversity of cultures, it is nonetheless a fact that the patterns of global change are affecting traditional institutions in a

more massive and rapid way than ever before and that, in many cases, there is insufficient time for traditional cultures to adapt in their own terms. This is a major problem of cultural change and governance that goes beyond sacred sites or traditional spirituality and impacts on the entire cultural and institutional context.

If I may return to the comments made in point three above, there is still very strong opposition on the ground —from the general public as much as from religious institutions— to the recognition of indigenous spirituality as legitimate and equal in value to the spirituality of the world's major institutionalised religions. The popularity of many dubious forms of beliefs and practices which are apparently linked to traditional spirituality (diviners, mediums, faith healers, etc.) makes the situation worse by reinforcing the equating of traditional spirituality with superstition.

Moreover, it is of critical importance worldwide, but especially in developing countries, that formal religious institutions become more open, ecumenical and tolerant and abandon their colonial attitude towards indigenous spirituality and their belief that indigenous people should 'convert' to a major world religion. If religious institutions continue to use the privileges they enjoy —wealth, public influence, access to political power— to push through policies and practices of benefit to them alone, there can be no solution to this problem as indigenous and traditional spirituality will continue to be undervalued, abused and condemned. Moreover, legislative frameworks guaranteeing freedom of

religion have limited applicability to traditional spirituality in most developing countries, where religious institutions and sects use them to advance their aggressive proselytism against traditional spirituality.

However, when religious institutions and leaders have become open, ecumenical, tolerant and sensitive, they have made highly significant contributions to a new ethics of respect and inclusion. In 2006, HAH Patriarch Bartholomew of the Orthodox Church invited an indigenous spiritual leader of the Amazon to bless the waters of the river where the ecological symposium he had organised was taking place. This gesture has immense symbolic value in theological, ethical and political terms, and shows that far from weakening the world's religions, healing the wounds created by their colonial history actually gives the world's major faiths a new historical perspective by reconnecting them with the greatest challenge of all: planetary survival. Religious institutions and leaders should not be afraid of becoming more ecumenical and open –rather than 'losing souls', they will gain in respect and moral authority.

An ethical approach that fosters respect for the spiritual values of all human communities, including the values of secular, non-religious spirituality, is critical for a planetary vision of sustainability in which powerful bonds exist among different cultures engaged in caring jointly for the planet. The conservation community should thus be supportive of approaches that:

- Recognise the diversity of the world's cultures and spiritualities as part of the vitality of humankind and the vitality of the planet;
- Value all forms of spirituality, religious or non-religious, because they connect humans to nature;
- Promote ecumenism among all faiths, religions and forms of spirituality as well as with the secular world and encourage dialogue centring on common values and approaches to improving human living on a sustainable planet;
- Recognise that all forms of spirituality are susceptible to change;
- Apply a rights-based approach which respects the rights of all peoples and individuals to their own beliefs and spiritual values and practices, as long as these practices do not harm others;
- Recognise the universal rights of every citizen of the world to a healthy environment and sustainable development, regardless of their beliefs;
- Promote equity and provide support for vulnerable or disadvantaged groups whose cultures and spiritual values tend to be ignored or discriminated against;
- Promote the integration of scientific knowledge and technical tools with traditional management systems based on local values;
- Take an enabling approach to communities and people with a view to strengthening local actions, institutions, processes and communities linked through spiritual traditions.



Environmental action by the Ecumenical Patriarchate

Theodota Nantsou

Religions are organised and structured systems of faith that unite large number of people who share the same spiritual beliefs. It can be argued, therefore, that religions are potentially crucial 'players' in dealing with several contemporary environmental issues, since:

- They address an 'exclusive' audience;
- They can easily influence the faithful and instil environmentally and socially responsible behaviours;
- Numerous important facilities (welfare foundations, social care institutions, communications media, educational institutions, etc.) are operated on behalf of religious institutions;
- They advocate an ethical stance and caring for all creation;
- Some of them own or manage areas or sites of great ecological value.

The separation of religion from secular life in modern societies means that religious leaders are not actively encouraged to involve themselves in issues of social concern beyond caring for the unprivileged and the dispossessed. Many environmental organisations have thus sought to involve religion in their struggle to spread the word about nature conservation and environmental action.

In the Christian world, the most prominent environmentally active Church leader is undoubtedly Bartholomew, the Ecumenical Patriarch of the Orthodox Church.

The Orthodox connection between faith and action

It was in the mid nineteen eighties that WWF International began to collaborate with the Ecumenical Patriarchate. No one at the time could have foreseen how astonishingly active the Ecumenical Patriarchate, which is based in Istanbul, would soon become in environmental awareness and conservation. Especially since the enthronement of Patriarch Bartholomew in 1992, the Ecumenical Patriarchate has definitely set the pace for Christian environmental activism. *“Patriarch Bartholomew I, Archbishop of Constantinople and New Rome, is the spiritual leader of 300 million Orthodox Christians around the world. He’s also extremely green, each year taking church leaders of all denominations to areas of the world beset with environmental problems – including the Amazon, the Arctic and the Danube. After announcing, on an island in the Aegean, that attacks on the environment should be considered sins, he called pollution of the world’s waters “a new Apocalypse” and led global calls for “creation care”. Way ahead of his time, he has made the environment an increasingly powerful strand of Christian thinking in Britain – and latterly the US— where traditionally right wing churches have followed his lead and now openly counter President Bush’s stance. Bartholomew, 67, is now heavily influencing the Pope and has shared a green stage with him several times in Rome. It all suggests institutional Christianity is greening up fast after centuries of ambivalence and outright hostility”*¹.

1 John Vidal (2008).

A number of important initiatives have gone on record as landmarks in the modern history of the Orthodox Church:

- 1988: Ecological conference on Patmos to mark the 1900th anniversary of the writing of the Apocalypse. The powerful symbolism of the Book of Revelation and its environmental dimension was the starting point for the most important inter-faith conference on the environment to date.
- 1989: Proclamation of Orthodox ‘Day of Creation’ (Patriarch Demetrios) and the introduction of a special liturgy blessing creation in its entirety.
- 1989-present day: Annual celebration of Orthodox Creation Day & patriarchal messages.
- 1991: Ecological conference at the Orthodox Academy of Crete. This was the first international environmental conference co-organised by the Ecumenical Patriarchate and WWF.
- 1994-1998: The Halki summer ecological seminars.
- 1995-present day: International environmental symposia.
- 1999: Establishment of the Halki Ecological Institute.
- Instigation of training seminars aiming at building environmental conservation awareness among clergy and theologians.
- Nature conservation and organic farming activities in monasteries.
- Collaboration with conservation organisations such as WWF. In this context, Ecumenical Patriarch Demetrios decla-

red September 1st the Orthodox Day of Creation and was represented at the Assisi meeting of religious leaders, which resulted in the Assisi declarations on Creation. Ecumenical Patriarch Bartholomew expanded the Patriarchate's collaboration with WWF by means of the Halki ecological seminars, which the two bodies stage in collaboration.

The Halki ecological seminars

The Theological School of Halki was forced to cease its operations in the 1970s by legislation passed by the Turkish Government. However, the informal re-opening of the historic theological school as a venue for ecological seminars serves as a powerful symbol of the Ecumenical Patriarchate's genuine concern for the environment. Aiming to unite the Christian churches in the battle against the global environmental crisis, the Ecumenical Patriarchate organised a series of summer seminars at the Theological School of Halki in collaboration with WWF International. The seminars brought scientists, theologians, environmentalists and Church leaders together to explore and promote commonly acceptable solutions to a series of environment-related issues. The five Halki Ecological Seminars dealt with religious education (1994), environmental ethics (1995), communications for the environment (1996), environmental justice (1997) and poverty (1998).

International symposia

The Ecumenical Patriarchate's greatest contribution to the global effort for envi-

ronmental protection and conservation thus far has been its organisation of a series of important international symposia on ships sailing environmentally 'troubled' waters in significant ecosystems. Through these high-profile symposia, the Patriarchate has addressed world leaders and brought together leading figures from the scientific, academic, political, civic and religious communities. The international symposia staged have been as follows:

1. 'Aegean: Revelation and the Environment', September 1995. Organised under the joint auspices of Ecumenical Patriarch Bartholomew and the International President of the Worldwide Fund for Nature, the Duke of Edinburgh, the symposium brought together some 200 scientists, religious leaders, philosophers, economists, artists and policy makers to examine the interrelation of religion and the environment, and to bring the insights, knowledge, inspirational abilities and methods of religion and science together to protect the natural world on which all life depends from progressive deterioration and, consequently, to boost human welfare. The participants were from 32 countries and included representatives of the Christian, Muslim, Jewish, Hindu, Buddhist, Jainist, Sikh, Zoroastrian and Bahai faiths.
2. 'The Black Sea in Crisis', September 1997. This second symposium on the general theme of Religion, Science and the Environment sought to identify specific actions that could be undertaken with a particular focus on

the Black Sea as a region and an environment in crisis.

3. 'Danube, a River of Life', October 1999. The third symposium focused its attention on the Danube in a time of turbulence, tragedy and new opportunities. Three months after NATO bombing of the area, Ecumenical Patriarch Bartholomew spoke on the banks of the Danube at Novi Sad and stressed the human and the environmental dimensions of war.
4. Adriatic Symposium, June 2002. The Adriatic Symposium addressed the ethical aspects of the environmental crisis, with a special focus on the environmental problems facing the Adriatic.
5. 'The Baltic: A Common Heritage, A Shared Responsibility', June 2003. The symposium passed through five countries in eight days with stops in Gdansk, Kaliningrad, Tallinn, Helsinki and Stockholm. Plenary sessions and working groups were held on board ship with numerous shore visits. The symposium brought together 250 participants — theologians, scientists, policy makers, environmentalists and journalists— under the patronage of His All Holiness the Ecumenical Patriarch and Romano Prodi, President of the European Commission.
6. 'Amazon: Source of Life', July 2006. Staged under the joint auspices of Ecumenical Patriarch Bartholomew and Kofi Annan, Secretary-General of the United Nations, the sixth symposium on Religion, Science and the Environment convened in Amazonia to focus on the sensitive and globally

significant ecosystems of the Amazon basin and to stress their interconnectedness and interaction with the life of local communities.

7. 'The Arctic: Mirror of Life', September 2007. Staged under the joint auspices of Ecumenical Patriarch Bartholomew, José Manuel Barroso, President of the European Commission and Kofi Annan, the former Secretary-General of the United Nations, this symposium focused on climate change and the sensitive ecosystems of the Arctic Circle.

These symposia have provided an ever more important platform for an enormous range of public figures (including local leaders in all the areas visited) to proclaim, share and develop a rich set of ideas regarding the fundamental causes of the environmental crisis confronting contemporary societies. The fact that the symposia have been held aboard ships and that local people have been warmly invited to attend has powerfully affirmed the principle that humankind is "all in the same boat" regardless of race, belief or social status. In other words, no human being will be able to avoid the consequences of a general environmental catastrophe. The first five symposia took place in regions where different cultures, religions and political systems have interacted peacefully or violently over many centuries. They served to draw international attention to a number of acute and growing challenges including chemical discharges into the Adriatic, dioxins in the Baltic, the debris of war in the Danube and the depletion of marine life in the Black Sea.

In the wake of these events, the Amazon and Arctic regions were specifically chosen for the 2006 and 2007 international symposia respectively with a view to marking out new territory for the Patriarch and the environmental dialogue he has spearheaded. Both regions are at the centre of a global debate on the causes and consequences of climate change and rising sea levels. In both regions, indigenous people have reason to be seriously concerned about their survival and their cultural and economic future, and risk numbering among the first victims of an ecological crisis which they had no part in causing. The Patriarch used these symposia to initiate a profound and searching dialogue with the indigenous peoples of the New World, in places where the arrival of organised Christianity often went hand in hand with rapacious and brutal colonisation. As the Patriarch has pointed out, Orthodox Christianity can discern in the culture of indigenous peoples many indispensable values which have been forgotten in the heartland of 'Christian civilisation'. And

like many indigenous cultures, Orthodox Christianity stresses that human beings are themselves part of the material world and the animal kingdom; in contrast, contemporary Western culture has often regarded the human being as a sort of disembodied brain which can modify the natural world without fear of the consequences. The Patriarch's concern for the future of the Brazilian rainforests and the melting of the Arctic ice cap was profoundly appreciated by the elected leaders of those regions, and widely publicised around the world.

The Orthodox paradigm of environmental responsibility

The importance of the Ecumenical Patriarchate's green activism is not restricted to simply passing on the 'right' solutions to a new audience. What is more significant is that the leader of the Orthodox world has developed a coherent and modern – if not novel – theology for the conservation of Creation. The classifica-

HAH Patriarch Bartholomew and symposium participants at sea in the Arctic



tion, for example, of deliberate damage to Creation as a major sin has made a clear statement to the Orthodox faithful that environmentally responsible behaviour has more profound existential dimensions that make it more than simply a personal choice. The Orthodox Primate is therefore promoting a new and greener way of life for the world's 300 million Orthodox Christians which blends perfectly with the oldest of the Orthodox traditions and, in turn, facilitates a genuine and life-long association between Christians and the environmental cause.

It is worth quoting part of a recent message from Ecumenical Patriarch Bartholomew to WWF Greece concerning the global dimensions of 'ecological sin': *"Since sin is disobeying the will of the Lord as well as the cause of evil, then deliberate environmental damage is indeed a sin. Indeed, it is hard to think of any other sin that is as universally destructive in its impact as the desecration of the sanctity of Creation. One need only consider the consequences of deeds that undermine the environment for all the living creatures and not just one or two individuals, since we are well aware that the elements of our world are all interdependent. Of course, ecological destruction has another unique dimension, since it deprives future generations of the chance to live in a healthy and balanced manner in the beautiful world God has created. For this reason, it is exceptionally significant that the Church act to avoid any further abuse and corruption of the world, which humanity has been called on to guard and not destroy"*².

2 Ecumenical Patriarch of Constantinople Bartholomew I (2006).

It is crucial that the leader of the Orthodox Church, the Ecumenical Patriarchate, should have led the way in involving the Orthodox world in addressing the global environmental crisis. Given that national Orthodox churches, including the Church of Greece, have been involved in scandals involving the abuse of nature and have failed to take any conservation initiatives of their own, the paradigm promoted by the Orthodox primate has set an environmentally responsible example for the Orthodox faithful.

The active environmental concern embodied by Ecumenical Patriarch Bartholomew has now become an integral part of Orthodox church life. The conversion of monastic buildings into models of sustainability, organic farming in monasteries and the incorporation of environmental messages into religious education are practices that are now embedded in the everyday life of the Orthodox Church. The Holy Convent of Chrysopigi in Chania, Crete has not only led the way in this respect, it has provided a paradigm for environmentally sustainable monastic life.

The Ecumenical Patriarchate has become a global leader in promoting conservation and sustainability through religion. Orthodox Churches worldwide can and must become important stakeholders in the global environmental movement, both as spiritual communities and as owners and managers of ecologically significant lands and buildings. And while the Ecumenical Patriarch's calls for environmental action have already borne fruit, there is still a long road to be travelled to their application on a large scale.

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The Ouranoupolis Statement¹

on sacred natural sites in technologically developed countries

TAKING INTO ACCOUNT the inspiring message of HAH the Ecumenical Patriarch Bartholomew to the Workshop participants;

NOTING the positive content of the welcoming addresses to the Delos² Workshop by the representatives of the Holy Community of Mt. Athos and of the Prefecture of Halkidiki;

CONSIDERING the contributions to the Workshop of the 22 participants from 11 countries in the form of case studies, papers and discussions;

EVALUATING the work carried out in the framework of the Delos Initiative during the past year;

The participants of the workshop arrived at the following conclusions:

Lessons from the case studies presented at the Workshop

All parties involved in sacred natural sites within protected areas should be encouraged to resolve in an equitable manner legal and land and resource ownership and use problems, as a prerequisite to achieving collaboration and synergy.

A rights-based approach and the empowerment of local communities should be promoted in all cases.

Through appropriate methods, the mutual awareness, sensitivity and capacity of both custodians of sacred sites and pro-

¹ Conclusions of a Delos Initiative Workshop held in Ouranoupolis (Greece) on 24-28 October 2007 within the framework of IUCN/WCPA and its Specialist Group on Cultural and Spiritual Values of Protected Areas.

tected area managers -as well as other interested parties- should be cultivated, leading to a common approach for conserving all relevant natural, cultural and spiritual values.

In this context, the establishment of joint approaches of research and learning among the key sides should be promoted.

The custodians of sacred sites should be fully involved in the development of management plans for protected areas, as well as participation in their management structures, and their contribution should be recognised and encouraged.

The right of custodians of sacred sites to limit access to certain areas should be respected and the appropriate measures should be included in management planning and public use, together with restrictions to visitor access in highly sensitive natural areas.

In addition, the participants of the Workshop agreed on the following specific points:

- The efforts of the Native American nations that are fighting to protect the Holy San Francisco Peaks from ski resort development should be supported.
- The Government of South Korea and the Convention on Wetlands should be encouraged to recognise the Mani-san tidal flats as Ramsar wetland of international importance, thus contributing to their conservation.
- The efforts to designate the Solovetsky World Heritage Site both for culture

(as it is already since 1992) and for nature should be encouraged, thus recognising its integrated character.

- The efforts of the Holy Convent of Chrysopigi in Chania, Crete, to protect its surrounding natural and cultural area from tourist and development pressures should be strengthened with the collaboration of local authorities.

International conventions and organisations could play a positive role in supporting internationally recognised sacred natural sites and should be encouraged to intensify their efforts for this purpose.

Management of monastic lands

Managers of protected areas, as well as relevant policy-makers, must be encouraged to respect the sanctity of Monastic sites and lands under their care and take them into consideration in planning, management and evaluation.

Monastic Communities must also be encouraged to manage their lands and facilities in an ecologically sustainable and equitable manner.

For this purpose, a joint and integrated approach to management planning and evaluation is required, which should be developed with participation from both sides.

Monastic sacred sites can provide useful inputs to education and public awareness and their contribution should be encouraged in related protected areas.

In addition, the principles and practice of monastic asceticism may provide profound lessons towards ecological

life styles and the sustainable use of natural resources -as demonstrated by the experience of the Holy Convent of Chrysopigi.

In this context, the positive initiatives of the Holy Community of Mt. Athos in preparing a special environmental study and a strategic plan for the entire autonomous territory, as well as measures for its implementation, through the establishment of a management body under the Holy Monastic Community, with the support of competent scientists and government agencies, were noted with appreciation.

Guidance for sacred natural sites in developed countries

Efforts should be strengthened to sensitise mainstream faiths -both authorities and followers- to nature conservation and broader environmental issues.

The potential contribution of protected natural areas to the conservation of sacred sites and vice versa should be enhanced.

Particular respect and care should be addressed to indigenous sacred sites in developed countries, which should be safeguarded from insensitive development pressures.

The Delos Initiative towards WCC²

Priority should be given to the publication of the proceedings of the Oura-

² IUCN Fourth World Conservation Congress, Barcelona, Catalonia (Spain), October 2008.

noupolis Workshop, together with the proceedings of the Montserrat Workshop, for dissemination during the WCC, as a contribution of the Delos Initiative to the ongoing dialogue on natural and cultural / spiritual values and to the implementation of conservation approaches that are sensitive to the cultures and values of all communities.

The Delos Initiative should contribute to the ongoing UNESCO / IUCN process for preparing guidance on sacred natural sites to be completed in 2008. In addition, the Delos Initiative should continue its systematic work for developing further guidance during the triennium 2008-2010 on the specificities of sacred natural sites in developed countries mainly for mainstream religions.

Additional case studies of sacred natural sites should be analyzed in the framework of the Initiative, with the goals to obtain more balanced geographical distribution, greater representativity of faiths and the recognition of successful examples, which can disseminate best practices and inspire emulation.

Naturally, the Delos Initiative is expected to contribute substantially to the appropriate events of the 2008 World Conservation Congress, within the framework of the WCPA Specialist Group on Cultural and Spiritual Values of Protected Areas.

The Initiative should examine potential synergy in its work with related international conventions and organisations, and especially with the World Heritage Convention.

Appreciation

Profound recognition is due of the broad and creative role played by HAH the Ecumenical Patriarch Bartholomew in bringing together faiths in favour of the Creation and the conservation of the natural environment, and sincere gratitude is expressed for his message of advice to the Delos2 Workshop.

Appreciation is also due of the official participation in the Workshop of the Holy Community of Mt. Athos, of the Greek Ministry of Environment, Physical Plan-

ning and Public Works and of the Prefecture of Halkidiki (Northern Greece).

The hospitable and highly informative reception of participants in the sacred monasteries of Varlaam in Meteora (Thessaly) and of the Assumption in Ormylia (Halkidiki) is also appreciated.

Special thanks are addressed to Med-INA (the Mediterranean Institute for Nature and Anthropos) for having organised the workshop with efficiency and sensitivity and having covered its costs with the support of the A.G. Leventis Foundation.

Olive grove of the Holly Convent of Chrysopigi, Crete, Greece





Appendices

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Appendix II: Case studies presented during the Workshop

Providing guidance for sacred natural sites in developed countries

Case studies presented during the workshop

Case-study	Location
Buila Vinturarita	Romania
Chrysopigi Convent	Crete-Greece
Dhimurru	Australia
Foreste Casentinesi	Italy
Holy San Francisco Peaks	Arizona-USA
Jabal La'îâm	Morocco
Mani-San Mountain	South Korea
Mt. Athos	Halkidiki-Greece
Poblet Monastery	Spain
Rila Monastery	Bulgaria
Sakya Tashi Ling Monastery	Spain
Solovetsky Islands	Russian Federation

Appendix III: Acknowledgements

The editors of this volume wish to express their gratitude to HAH The Ecumenical Patriarch Bartholomew I for placing the Ouranoupolis Workshop under his aegis, as well as to the Holy Community of Mt. Athos and the Prefecture of Halkidiki for their moral support.

Thanks are due to Med-INA for organising and funding the Workshop through private donations and to the Bodossakis Foundation in Athens for its financial contribution to the publication of the workshop proceedings.

The Workshop participants and authors of this publication merit commendation for their significant contribution. Thanks are also due to the following persons for their contribution to the editing and publication of the book: Irini Lyratzaki and Stefanos Doudouras (Med-INA) for the initial review and editing of the texts, Michael Eleftheriou for the final editing of the texts and edition supervision, Pavlina Alexandropoulou for designing the publication and I. Peppas A.B.E.E. for printing and binding the book.

The special role of Irini Lyratzaki in co-ordinating all the activities necessary for the realisation of this publication must be particularly mentioned.

Photo credits by chapter

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