Developing and Testing a Methodology and Tools for the Inventorying of Sacred Natural Sites of Indigenous and Traditional Peoples in Mexico

Mercedes Otegui-Acha 2007

Pronatura Mexico/
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In Collaboration with:
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Preface

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This report contains the first methodological approach for the inventorying of Sacred Natural Sites worldwide. As head of Pronatura Mexico, the country’s largest and most influential conservation non-governmental organization, I believe this ground-breaking experience is of key relevance for finding new and innovative ways to become more efficient in the conservation of our natural resources. To grasp and translate into a methodological process such an ethereal concept such as that of the “sacred” must be applauded and I sure hope the proposed methodology and tools will find an echo in the conservation work of our colleagues worldwide.

As the study clearly points out, Mexico is one of the world’s most culturally and biologically diverse countries. It is hence of the utmost importance for us, as Mexicans, to proceed with the implementation of a bio-cultural approach towards the conservation of our rich natural heritage which, as the case of Sacred Natural Sites shows, goes hand by hand with the preservation of our cultural patrimony. I hence adhere with conviction to the challenge raised in this research project to protect not only our country’s rich biodiversity but also its related cultural values, practices, Traditional Ecological Knowledge, languages and belief systems.

My ample years of experience in the conservation field also prompts my believing in the potential of Sacred Natural Sites as community conserved areas, part of more integrated protected area networks which would in turn help in their long-term survival, expansion and effective management. To validate this belief, Pronatura Mexico launched recently a Sacred Natural Sites Initiative that is to test and work in Mexico this approach following the example set by leading conservation organizations such as is the case of IUCN- The World Conservation Union.

On a final note, I am also proud of the support the SIG department of Pronatura Mexico provided for this research project, especially Gabriela García, who produced the maps supporting and validating the methodology and tools proposed by the author in her discussion. Pronatura Mexico is ready to test and monitor the implementation of these instruments in those conservation areas in which we focus in Mexico, to benefit from the incorporation of a bio-cultural approach in our conservation projects and to eventually lead the way for other national conservation organizations and actors.

Lic. Martín Gutiérrez Lacayo
General Director
Pronatura Mexico
"How can you buy or sell the sky? The land? The idea is strange to us. If we do not own the freshness of the air and the sparkle of the water, how can you buy them? Every part of this earth is sacred to my people.

Every shining pine needle, every sandy shore, every mist in the dark woods, every meadow, every humming insect. All are holy in the memory and experience of my people. If we sell our land, remember that the air is precious to us, that the air shares its spirit with all the life it supports. The wind that gave our grandfather his first breath also received his last sigh. The wind also gives our children the spirit of life. So if we sell you our land, you must keep it apart and sacred, a place where man can go to taste the wind that is sweetened by the meadow flowers.

Will you teach your children what we have taught our children? That the earth is our mother? What befalls the earth befalls all the sons of the earth?

This we know: the earth does not belong to man, man belongs to earth. All things are connected like the blood that unites us all. Man did not weave the web of life, he is merely a strand in it. Whatever he does to the web, he does to himself."

Chief Seattle in a letter to US President Franklin Pierce, 1855


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Executive Summary

Indigenous and traditional peoples’ cultural values and spirituality have led very often to practices of establishment and protection of, and respect for, Sacred Natural Places, environments usually amalgamating rich biodiversity and high spiritual values.

Although the literature produced so far points to the high biodiversity and cultural value of many Sacred Natural Sites around the world, quantitative and scientific data on their global biodiversity and cultural significance doesn’t exist, and no systematic inventories have been carried out to fill this gap. UNEP’s World Conservation Monitoring Centre (WCMC), for example, has recorded some Sacred Natural Sites, but its database is far from exhaustive; even at the national level, there is no systematic information on the matter, and literature that documents Sacred Natural Sites in a more detailed way from the conservation perspective is only emerging recently. Therefore a large information and documentation gap exists, constituting a major obstacle to ensuring support and effective management of biodiversity and culturally rich Sacred Natural Sites.

Mexico is one of the most biologically and culturally diverse countries in the world and Sacred Natural Sites can be considered an expression of Mexico’s biological and cultural richness. To date and despite many external threats and challenges, many of them still show resilience and continue to protect natural, cultural and spiritual values of the communities. However, little is known about their number, distribution, owner/managers, communities’, natural, cultural and spiritual characteristics, state of conservation, management approaches, legal status, most pressing threats, etc. It is also presumed that most formal protected areas in Mexico include sacred sites within their boundaries.

As stated above, such gaps of knowledge do not allow for an appropriate planning, action and support for the conservation and sustainable management of Sacred Natural Sites, and many of them are bound to disappear before they are known or registered. The situation of most countries in the world is not too different from that of Mexico regarding the lack of knowledge on Sacred Natural Sites. Therefore, there is an evident need to register, document, recognize and support those existing Sacred Natural Sites currently lacking support and exposed to innumerable threats.

In response to this knowledge gap, experts participating at the Vth World Protected Areas Congress (2003) and other meetings have reiterated the usefulness of building up registries of Sacred Natural Sites, based on voluntary disclosure and informed consent of their traditional owners and managers. It also has to be noted that building up such registries is not a simple task. On the one hand, all the concerned communities need to be contacted, informed, consulted, and their consent sought; on the other hand, appropriate tools and methodologies are needed – from consultation and consent protocols to classification criteria and matrices. All such tools and methodologies need to be developed – although some existing instruments could be adapted for this purpose.

The purpose of this research was to facilitate the eventual creation of a national database of Sacred Natural Sites through the development of a methodology and tools for their inventorying that are to be tested in the Mexican context. Mexico, due to its cultural and biological richness, the Sacred Natural Sites it contains, and its experience in protected areas and other conservation strategies, as well as in studying indigenous cultures, is a very appropriate country to serve as test case for testing a methodology and the tools leading to the eventual creation of a National Inventory of Sacred Natural Sites.

The outline of this research paper intends to illustrate the long road travelled by the author in order to come up with a proposed methodology and tools: the structure of the document seeks to highlight the main components and phases in developing and initially testing the methodology and tools proposed.

Hence, the document is divided into 6 main chapters that can be summarized as follows:

Chapter 1 intends to come up with a general overview of the “sacred” context in which Sacred Natural Sites find a reason for being: this section seeks to demonstrate the many dimensions of the sacred and the many perceptions of this concept held by different peoples, cultures and spiritual traditions. Illustrative, summarized examples of Sacred Natural Sites around the world are used to back up and complement the main point and arguments throughout the discussion, a model that is to be used throughout the paper.

Chapter 2 seeks to establish a rationale leading to a working definition of a “Sacred Natural Site”. Hence, the discussion elaborates on the various descriptions depicting sacred entities and the wide array of terms used indistinctly by the bibliography reviewed to refer to natural sacred entities of different geographical scales and physiographical characteristics all having the common denominator of their sacred and revered status. It is in this section that key working premises are also established further narrowing down our working definition of Sacred Natural Sites.

This section then moves on to illustrate the role played by Sacred Natural Sites in safeguarding indigenous and traditional biodiversity and cultural diversity. This section intends to demonstrate the validity and effectiveness of Sacred Natural Sites as bio-cultural conservation mechanisms in their own right. The international policy context benefiting and/or promoting this innovative view is also briefly reviewed and a final reflection on the challenges ahead closes the two chapters of the document intended to offer the reader a general overview on the status quo of Sacred Natural Sites conservation worldwide.

This established, the document explores and justifies in Chapter 3 the selection of Mexico as the country for the initial testing of the methodology and tools proposed. This section summarizes the main biological, cultural and political traits that make of Mexico the ideal testing ground for this innovative research project.

Chapter 4 builds on the analysis work lay out in the previous chapters to concentrate in the methodological steps and tools proposed for inventorying Sacred Natural Sites. The chapter is divided into the 5 main phases proposed and envisioned in a working framework to develop the methodology and tools. Each phase describes the steps to be taken vis a vis the methodological guidelines, the tools to accompany them, the identification of the main stakeholders involved, the timeframe suggested for each of the phases and the benchmarks recommended to monitor the progress leading to a successful implementation of the proposed framework. This section also depicts the various tools accompanying the implementation of each one of the Phases: such as is the case of the various agreement formats, registration templates, questionnaire forms, GIS maps, database templates, etc. The in depth analysis of these various tools is to be found in the corresponding Annexes section.

The document moves on into Chapter 5 to conduct a preliminary exercise to test the effectiveness and validity of the methodology and tools proposed by using three Sacred Natural Sites case studies while identifying two other potential Sacred Natural Sites distribution sites for further tune the methodology and tools. This Chapter proves the accurateness of the criteria used when developing the methodological approach towards the identification of potential Sacred Natural Sites distribution areas/sites and sets an optimistic tone for future endeavours of the same nature in the near future.

And it is with the overall Conclusion in Chapter 6 that the document comes to an end when reflecting on the importance of not losing momentum and joining forces amongst national and international conservation actors to effectively carry on and promote the effective conservation of Sacred Natural Sites worldwide.
CHAPTER 1: Introduction

The inherent sacredness of nature

The word “sacred” comes from the Latin “sacrare” meaning “to consecrate”; when one evokes this term other connotations come naturally to mind: “adored”, “divine”, “exalted”, “holy”, “inviolable”, “religious”, “revered”, “spiritual”… The word derives from the Latin “sacramentum” (Box 1). In classical terms, the sacred is that which is set apart as holy for religious reasons, usually by religious ceremony or ritual. It is consecrated by religion, and consecrated to religious and spiritual use. The concept of “sacred” in most societies is often associated with the “secret” or “forbidden”.

The sacred is opposite to that which is “ secular”, “ profane” or “common-place”. When extrapolated to a physical/natural context, a site, one could argue that “a sacred site is frequently understood to mean a place set aside, with a point of entry, with a religious experience within” (Jeaneaud 2001). The following description recorded in an inscription on the walls of an ancient Romanesque hermitage in Spain clearly describes this experience: “To enter in a temple is not to be taken lightly since it is the sacred space in which the communication of the individual and his/her higher power becomes more fluid and intense. A sacred space is a never ending source of strength and sacredness that allows individuals, by the simple fact of entering it, to participate of that strength and to enter in communion with that sacredness…proceed to enter into the temple and place yourself under the dome allowing for the light piercing through the windows to illuminate your whole self…then listen carefully…allow the space to penetrate inside you, allow it to speak to you, ask for it, with a humble attitude, ask for it…open your innermost essence to your higher power…” (Recorded in the walls of Eunate, Navarra, Spain 2006).

When one does the same linguistic exercise with the term “natural” synonyms such as “uncultivated”, “undomesticated”, “unaltered”, “unchanged”, “unprocessed”, “unrefined”, “whole” and “wild” appear (Harmon 2003). As Jeaneaud (2001) points out, there is considerable debate over the meaning of “natural” in the development and environmental literature: anthropologists conclude that what we consider to be “nature” and “natural”, and “how we engage with the natural” varies across cultures.

The interrelatedness of all things is a basic concept that is central to many fields of study, such as economics, ecology, physics, and spirituality. Yet, as Putney affirms: “it is the profound, personal, gut-level knowing of oneness that causes individuals and communities to act to seek harmony with the environment and with the rest of the humanity” (World Commission on Protected Areas – WCPA cited by Putney 2003). Reinforcing this idea, as Peter Matthiessen (1978) reflected on his acclaimed novel “The Snow Leopard” the “I understand all this, not in my mind but in my heart, knowing how meaningless is to try to capture what can be not expressed, knowing that mere words will remain when I read it all again…”

There is a Western tendency to concentrate on “knowing” based on scientific, technical and economic criteria, while assigning less importance to other ways of knowing through humanistic, cultural, and spiritual means (WCPA 2001).

Indeed, the Western tradition views nature as something separate from people revealing a biased dualistic “anthropocentric” cultural and religious approach towards nature. The religious traditions that developed in the Middle East (Islam, Judaism and Christianity) tend to view nature in anthropocentric terms, whereas Eastern religions (Buddhism, Hinduism and Taoism) (Boxes 1 and 2) relate to nature in “ecocentric terms” (Harmon 2001). For the enlightened sages of the Eastern tradition, the forest was a world of wisdom, peace and spirituality (Ramakrishnan 2003).

The cosmogenesis of indigenous and traditional peoples’ worldwide also manifest a profound understanding of the inherent sacredness of nature and the reverence it entails: these peoples have developed a deep sense of place that encompasses the whole of their territories: for them, concepts such as “community”, “culture”, “spirituality”, “nature” and “territory” are an indivisible whole (Masinde and Tavera 1999, cited by Harmon 2003).

Box 1 Sacred Beyuls in the Himalayas

The Beyul concept is rooted in the Nyinmapa tradition of Tibetan Buddhism. Beyuls are sacred hidden valleys said to be set aside by Padmasambhava. They are refuges and places of retreat, often providing hideouts during periods of conflict. Beyuls are typically isolated, peaceful, tranquil valleys abundant with natural resources including ample water and fertile soil. It is believed that the notion of “Shangri La” in James Hilton’s popular novel ”Lost Horizon” was inspired by a Beyul in southeast Tibet.

Beyuls are generally large (hundred of square kilometers in size), isolated, and vacant mountain valleys. They can be opened by tertons (treasure seekers) following discovery of terma (secret treasures, i.e. ancient texts) which describe the access to these sacred lands. It is believed that only people with pure hearts can gain access to these sites, and that, while many Beyuls have already been exposed and settled, there are many others awaiting discovery.

Beyuls exist throughout the Buddhist regions of the Himalayas, including Sikkim, Bhutan, Nepal, India and China. The area covered by this category of Sacred Natural Sites is extensive. It is noted that there may as many as 108 Beyuls in the Himalayas. Some Beyuls – such as Pemako in the Yunnan Province of China, are well known for their natural beauty and sanctity, whereas others may be known only locally. Most communities in the Himalayan mountain valleys tend to associate their homeland with a Beyul.

Source: Lhakpa N. Sherpa in “The Importance of Sacred Natural Sites for Biodiversity Conservation”

Box 2 The Satoyama traditional lifestyle in Japan

The traditional lifestyle of Satoyama is repeatedly referred to as a model for biodiversity conservation and this is supported theoretically by traditional Japanese. Satoyama follows the core principle of harmonious co-existence between man and nature; Satoyama has two characters, one depicts the countryside or village and the other depicts the mountain.

In accordance with the Satoyama philosophy, the Japanese have a lot of respect for Mount Fuji, the highest mountain in Japan. Mount Fuji is a veritable symbol of the beautiful mountain landscape, so much so that there are many local ‘Fujis’ in various sites that are representative of this beauty and for the most part are sacred mountains.

Source: Kunio Iwatsuki in “The Importance of Sacred Natural Sites for Biodiversity Conservation”
The Vilcanota Spiritual Park in the Andes, Peru

The Vilcanota mountain range of the Southern Peruvian Andes constitutes the second most important glacier system in Peru and is home to the sacred mountain of Ausangate. It covers areas of great highs and lows including snowcapped peaks, steeped slopes, deep canyons, and isolated valleys that contain an amazing diversity of microhabitats and species.

The local inhabitants, the Q’eros, have cultivated a spirituality which includes a worldview, principles and values tied to respectful and reciprocal relationships with nature and all living beings, as well as elements such as stars, rivers, and rocks. Rituals are the external expression of this worldview and through them people ask for permission or give thanks to the Pachamama (Mother Earth) and to the Apus (deities of the mountains) in every agrarian and pastoral activity. In fact, Q’eros’ indigenous knowledge is embedded in cultural values with strong spiritual dimensions as well as ecological, economic, emotional and aesthetic ones.

Snow-capped Ausangate (6,384 mts.) is considered the main sacred mountain or Apu for the Q’eros and the protector of all indigenous communities of Southern Peru. Ausangate is the highest mountain of the region and its sacred quality, since the ancient time of the Incas, lies in the fact that it gives birth to the Vilcanota River, the most sacred of the rivers, which runs through the Sacred Valley towards Machu Picchu. For Quechua communities, Ausangate is a powerful Apu who possesses the power of Camar (vital energy) and it is considered to be the lord of the animals, crops and plants. Its power is recognized even beyond the country.

Source: Alejandro Argumedo in “Conservation of Biodiversity Rich Sacred Natural Sites: a medium-sized GEF proposal”

There are also examples of indigenous and traditional peoples in which nature is perceived in an “animistic” way as a breathing and living organism that is to be tamed or taken care for but worshipped and revered in both cases (Box 4).

Box 3 The Vilcanota Spiritual Park in the Andes, Peru

There are also examples of indigenous and traditional peoples in which nature is perceived in an “animistic” way as a breathing and living organism that is to be tamed or taken care for but worshipped and revered in both cases (Box 4).

Box 4 Pegging the Earth and the Mountains: Shamanistic Rituals in Tibet

Pegging the earth and the mountains is a shamanistic ritual to tame the landscape and to bind the spirit powers. The earth is intactable and full of gods and demons. It is nature in a seemingly solid and tangible form. To peg the earth is to control it, to make it manageable and submissive. Pegging makes order out of chaos. It binds the gods and demons; it establishes a strong center with peace and security in the land.

First the earth is pegged by the mountains which are like nails or ritual daggers piercing the earth: whatever its origin, the mountain pierces the earth and subjudgets it. Then the mountain itself is pegged down: usually four “nails”, in the form of small mountains are driven in at the cardinal points, four rivers are made to flow and four sky-burial sites are established. Then, a circular path of circumambulation joining the sites of the “nails” in the cardinal directions is laid down. The mountain is now bound to the earth so that it can not fly away.

Mountains peg the earth on a mythic, macrocosmic level. On the human level, representations of the mountain also bind the earth and its demons. All or any of these pegs may be thought as acupuncture needles in the body of the earth, balancing and healing the energetic pattern of the entire sacred landscape.

Source: Keith Dowman in “The Sacred Life of Tibet”

As Oviedo (2005) concludes, one of the most salient forms of cultural/spiritual-based conservation “has been the establishment of Sacred Natural Sites, which often harbor valuable biodiversity and protect key ecosystems. Indigenous and traditional societies created protected areas long before the advent of the Yellowstone model on which current protected area legislation, policy and practice is based worldwide. Sacred Natural Sites are indeed the oldest protected areas of the planet”.

Ramakrishnan (2003) complements Oviedo’s affirmation when stating that “since sacred groves form an integral part of all indigenous and traditional societies in regions such as Africa and Asia (Ramakrishnan et al. 1998) they could be viewed as one of the earliest expressions of the sacred aspect of a socio-ecological system in the evolutionary scale”. Indeed, the concept of “sacred grove”, a small patch of the natural forest ecosystem devoid of human habitation and protected by human societies and in a relatively undisturbed state, is “an expression of an important relationship to the divine or to nature” (Ramakrishnan et al. 1998). These groves traditionally served as an area for religious rituals to propitiate their nature-linked deities (wind, water, fire, sun, etc.), as well as the site for the worship of their ancestral spirits; in this sense, the grove could be viewed as symbiotic of nature-human interconnections in indigenous and traditional societies (Ramakrishnan 2003) (Box 5).

Box 5 The Sacred Groves of the Kodagu district in India

The Kodagu district in the Western Ghats of Karnataka State is considered as the “hot-spot of sacred groves” due to abundance of this tradition. The sacred groves in the district harbor the richest biodiversity of the Western Ghats. It forms a good example of bio-cultural conservation.

The district landscape is bestowed with deep forests associated with horticultural gardens on the mountain slopes and paddy cultivation in valleys. Amidst such a landscape sacred conservation practices are spread in association with habitats such as the sacred groves and sacred water bodies. The sacred groves form the centre of livelihood of local people such as the rituals for agriculture, etc. need to be performed in the sacred groves. The art forms associated with the sacred groves depict the close relationship of local people with the forests and the overall biodiversity.

The land tenure system for the sacred groves in the Kodagu district is unique. The ownership of the sacred groves is with the State Forest Department. The recent government initiatives have officially recognized the role of local people in managing these sacred groves.

CHAPTER 2: Rationale

What is a Sacred Natural Site?

How can one grasp, materialize and apply a methodological approach to the concept of the sacred? Indeed, one of the most challenging endeavors of this research project has been to come up with a standardized definition of “Sacred Natural Site” for methodological purposes that is to encompass, capture and reflect the wide variety of sacred entities that have been described by different authors using indistinctly a wide array of terms such as: “sacred sites”, “sacred natural sites”, “sacred land- scapes”, “traditional sites”, “archaeological cultural sites”, “cultural landscapes”, “sacred land”, “sacred features”, “sites of cultural value”, “spiritual sites”, “religious sites”, “sacred spaces”, “ritu- alistic sites”, etc. In what all authors in fact coincide is in the fact that individuals have assigned them all a special sacred status.

Spatial dimensions of Sacred Entities

Although the concept of the sacred is a dynamic and evolving one, it can be conceptualized – for methodological purposes - along a spatial scale as proposed by Ramakrishnan (2003). Following, though adapting this model, sacred entities are to be in this research categorized as follows: (1) Spatially Disperse Sacred Landscapes (Boxes 7 and 8); (2) Spatially Definable Sacred Landscapes (Box 9); (3) Sacred Natural Physiographical Features (Box 10) that may include: mountains, desert oasis, valleys, rivers, lakes, caves, forest groves, coastal waters, islands, wetlands, trees, groves of shrubs, stone arrangements, quarries, caves, ponds, outcrops, gorges, ravines, hills, rock holes, creeks, waterholes, sand hills, termite mounds, etc.; and (4) Sacred Floral and Faunal Species that confer a sacred status to either a landscape or a physiographical natural feature (Box 11). The Spatial Dimension of Sacred Entities: A Summary

Spatially Disperse Sacred Landscapes: having an extensive geographical influence zone; transcending geopolitical frontiers, usually unified and connected through sacred pilgrimages routes or symbolic natural physiographical features such as rivers (i.e. Ganga).

Spatially Definable Sacred Landscapes: well-defined and cohesive spiritual and cultural norms and practices; extensive, and geographical limits ranging from 300,000 to 10 hectares.

Sacred Natural Physiographical Features: include a wide variety of physiographical features that can be contained within a spatially disperse or definable sacred landscape, ranging from mountains, lakes, rivers and desert oases through forest groves, islands, marshes, caves, stone arrangements, etc.

Floral and Faunal Sacred Species: include those species that are attributed a sacred, ritualistic, and/or medi- cinal use by the community. Their presence confers a sacred status to either a landscape or a sacred physiographical feature.

This proposed classification model shows that the “sacred” covers and permeates all “dimensions”: from the most ample geographical sacred landscapes through physiographical features ranging in size according to their specific nature to the punctuality of sacred species that are sacred “perse” and render sacredness to the spatial entities containing them.

Box 7 Sacred Entities: Spatially Disperse Sacred Landscapes in Asia

One of the best examples linking highland and lowland systems is the Ganga river system in India. Originating at Gomukh in the higher reaches of the Garhwal Himalaya, the Ganga flows through the northern plains of Uttar Pradesh, Bihar, and West Bengal before draining into the Bay of Bengal in the east. The sacred land, the river tributaries, the human dwellings, all the natural and human-managed ecosystems, the chain temples dating back to antiquity, the holy cities of the mountain zone and those of the plains together represent a set of inter-connected ecosystems bound together by the sacred river itself.

The Japanese Kii mountain region of Koya-san, Kumano Sanzan, Yoshino and Omira is another spatially disperse sacred landscape, rich in biologically diverse temperate forests, Buddhist temples, and mountainous. Being a hub for various religious interactions since ancient times, the Kii Peninsula represents a blend of the indigenous Shinto religion, based on nature worship and the Buddhism that came subsequently. Koya-san, which is the location for the Kongobu-ji temple of the Shingon sect of Buddhism brought from China, is a major landmark for the Japanese and part of the great pilgrimage route running through the Kii mountain range. At the root of this belief system is the religious conviction that mountains, forests, lakes, ponds, and other elements of nature are sacred places where deities live; that mountains are the home of the gods of wealth and prosperity; that a dead person climbs a mountain on his or her way to heaven; and that rivers and sea are holy entry points to paradise. Here in this landscape, the natural merges with the cultural heritage to form a complex but integrated whole.

Source: Ramakrishnan in “The Full Value of Parks”

Box 8 Sacred Entities: A Spatially Disperse Sacred Landscape in Mexico

The Huichol’s cosmogony perceives their “spiritual geography” as a spatially disperse sacred landscape marked in each of its cardinal points by sacred features and united by a sacred pilgrimage route to be traveled once a year. This landscape expands throughout four different states in the Mexican territory. These five cardinal points are: Haranama (Isla del Rey – King Island) (in the coastal state of Nayarit) representing the western end of their world and the dwelling of the sea goddess and queen of the five colored corn; Naunak Manaka (Cerro Gordo -Fat Hill- in the state of Durango) representing the northern most point where the canes of the goddess Rakevike, mother of all gods, finally rested and where the wind and the royal eagle, her messengers, were born; Xapaneryem (Isla de los Alacereos – Scorpion Island in the lake of Chapala in the state of Jalisco) that represents the southern tip where Wayotlame, a farmer touched first ground after the universal flood; and Wirikuta (in the Chihuahuan Desert of the state of San Luis Potosi) the eastern end of the Huichol “cosmological geography” and final desti- nation of the ancestors and deities in the pilgrimage they undertake to witness the birth of the sun. Wirikuta is also the scenario where the first hunt of the deer took place: it was from the deer’s foot prints that the peyote, the sacred cactus, was born. In the center of the Huichol universe is Tezkatla (in the Huichol community of Santa Catarina) the very site where the revered sacred fire is kept.

Source: Mercedes Otegui in “The Full Value of Parks”

Box 9 Sacred Entities: A Spatially Definable Sacred Landscape in Sikkim, India

The area below Mount Khangchendzonga in West Sikkim, referred to as Demagong, is the core of the sacred land of the former kingdom of Sikkim. Here offerings are made to the protective deities, but no meaningful perform- ance of Buddhist rituals is possible if the land and water is desecrated. Village-level activities on the land and water resources are permitted. Any large scale human induced disturbance in the land of the holy Yoksum region would destroy the hidden treas- ures (ten) in such a way that the chances of a visionary recovery taking some time in the future will diminish (the last such discovery is thought to have occurred 540 years ago). Any major disturbance to the river system will disturb the ruling deities of the 109 hidden lakes of the river, thus leading to serious calamity. Indeed, the very cultural fabric of Sikkimese society is obviously dependent upon the conservation of the whole sacred landscape. The uniqueness of this heritage lies in the holism and interconnection between the soil, water, biota, visible water bodies, the river and the lake systems on the river bed, together with physical monuments as sanctuaries.

Source: Ramakrishnan in “The Importance of Sacred Natural Sites for Biodiversity Conservation”

Figure 1.

Photo: Johnson, R.
Sacred Entities: Sacred Natural Physiographical Features in Australia

The Tanami Desert is a semi-desert covering a large area of land in the central-west of the Northern Territory of Australia, as well as a much smaller area in Western Australia’s north east. The major part of the Tanami Desert has been inhabited by Warlpiri-speaking Aboriginal people for thousands of years. For these people, the landscape of the Tanami Desert is covered with sites that mark events and histories of the extraordinary jukurrpa being and ancestors, whose essence remains in these places that are usually linked to prominent physiographical features including: trees, groves of shrubs, stone arrangements, quarries, caves, outcrops, lakes, billabongs, claypans, gorges, ravines, mountains, ranges, hills, rock holes, soakages, creeks, rivers, waterholes, sand hills, termite mounds, and sinkholes.

The knowledge of the spatial organizations of sites is primarily coded in exhaustive narratives and song cycles and material manifested in sacred paraphernalia and associated designs. This knowledge is also passed on through sand mapping and drawings. The sites of the Tanami Desert can be divided into categories that are easily conceptualized in terms of the degree to which a place may be said to be either “open” or “closed”. The most restricted places are those that are close to members of the opposite sex as well as to those members of the opposite sex that have not yet attained a sufficient age, level of ritual knowledge, or grade of initiation. The next most important places are associated with a major event or activity on a single dreaming track, as major events also include those that have an association with several important jukurrpa. Of lesser significance are those places that signify only a minor event or “sang” in the travels of a jukurrpa.

Other key working premises that narrow further down our working definition of a Sacred Natural Site are as follows:

Sacred Natural Sites of Indigenous and Traditional Peoples: this research project is to focus on the Sacred Natural Sites of indigenous and traditional peoples rather than sacred sites of the major world faiths. The relationship between the Sacred Natural Sites of indigenous and traditional peoples with the world’s major faiths has in some cases a complex and troublesome history, such as in some religions in Asia. Many traditional Sacred Natural Sites have been appropriated or destroyed because they were considered pagan or idolatrous by newly emerging world faiths, or instances religious buildings were forcefully superimposed upon traditional sites. As Jeanrenaud (2001) points out bluntly: “while it is important to guard against “demonizing” the involvement of major faiths with indigenous and traditional peoples, it is important to acknowledge that the erosion of Sacred Natural Sites can be directly related to the expansion of the dominant faiths in many cases”.

Sacred Natural Sites as viable mechanisms for bio-cultural conservation: this project is to focus on Sacred Natural Sites that possess and combine both a spiritual/cultural significance and biodiversity value. This research project will consider Sacred Natural Sites on the basis of their contributions to biodiversity, regardless of their “naturalness” from different perspectives. The working approach therefore has a dual character in that it reflects cultural/spiritual features and environmental significance. The literature reviewed has also shown that Sacred Natural Sites’ conservation further promotes and is intrinsically associated with: indigenous and traditional peoples’ heritage, cultural identity, linguistic diversity, livelihoods, Traditional Ecological Knowledge (TEK) and human rights issues.

Sacred Natural Sites and Protected Areas: this research project is to concentrate on Sacred Natural Sites located both within and outside the boundaries of legally designated protected areas. Most of the times, and when integrated into protected areas, Sacred Natural Sites lack the recognition of the government agencies managing these areas. When located outside these protected frameworks, Sacred Natural Sites face many threats and pressures, their very existence most of the times being at the brink of extinction. The Secrecy of the Sacred: many Sacred Natural Sites are “secret” to a community at large, or to a specific gender or age group hence their existence cannot be revealed, their secrecy compromised. This project will respect the confidentiality of such sites and as such is important to consider and eventually conduct the inventorying of not only the confidentiality disclosed on a voluntary basis by the indigenous and tradition communities.¹

¹ The literature shows that experienced researchers, who have been working with communities, have extreme difficulties in disclosing sensitive information about the sites, unless they are being consulted for a while and told that this is their pre-disposition for disclosing information. It is interesting that sometimes sites are not strongly considered by communities to be highly sensitive, but are considered to be mentioned or mentioned in one way or another. The reluctance the researchers show in disclosing sensitive information can be a sign of the fear about the secrecy status of their sacred entities.

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Sacred Entities: Sacred Natural Floral Species in Mexico

Wirikuta, the land of the sacred “peyote” is located in the Chihuahua Desert of the State of San Luis Potosi in Mexico. The Chihuahua is one of the most biologically rich and diverse deserts in the world stretching nearly 630,000 sq. km from the Mexican plateau into southeast Arizona, across New Mexico and west Texas. The importance of Wirikuta in the ecoregion of Chihuahuan Desert is notable, because it lodges half the species of its flora, 71% of its birds and 66% of its mammals, with a high level of endemism.

Wirikuta is the eastern end of an annual pilgrimage conducted by the Huichol “jicareros”. It was in Wirikuta that the sun was born at last and it is in Wirikuta, the sacred land of the Huichol, where the “Jicareros” have set the sacred cacti to enable communication with the deities and ancestors. The peyote, the sacred plant that gives rise to their communion with the divine, is a small cactus, Lophophora williamsii that contains different types of alkalo- ids, such as hyaline, anhalamine. Its impact produces delicious and hallucinating effects like the smoking of marijuana and LSD. Extensive goat ranching has affected the natural vegetation by modifying its structure, and causing a severe impact on the flora and fauna. Wirikuta has at an international level, in recent years has caused a notable increase of visitors in search of mystical or psy- chedelic experiences. This unorganized tourism generates an additional impact to the surroundings, including the transformation of the Huichol sanctuaries and the unrestrained picking of peyote, which has caused the destruc- tion of the distribution areas of the plant.

Source: Mercedes Otegui in “The Importance of Sacred Natural Sites for Biodiversity Conservation”

Spaces of ritualistic and initiation ceremonies; reference spiritual or communication with the “divine” reality; places of contact with the sources of healing water and plants.

Common to them all is also the fact that they are areas where nature, the divine and remembrances come together in special combinations that are particularly meaningful to a community, society or people and are hence removed from everyday access and resource use (Oviedo 2005).

(ii) Working premises for this research project

The term “Sacred Natural Site” is to be used in this research in a generic sense as to include those sacred entities (spatially definable sacred landscapes, sacred natural physiographical features and sacred floral and faunal species) that are venerated and held in awe while acting as a linkage between nature and culture/spirituality for the communities involved. Thus, while the term may refer to sites of spiritual importance, it also encompasses places that are of symbolic significance - where space, place, memory and spiritual meaning come together (Oviedo 2000, Jeanrenaud 2003).

Other key working premises that narrow further down our working definition of a Sacred Natural Site are as follows:

Sacred Natural Sites of Indigenous and Traditional Peoples: this research project is to focus on the Sacred Natural Sites of indigenous and traditional peoples rather than sacred sites of the major world faiths. The relationship between the Sacred Natural Sites of indigenous and traditional peoples with the world’s major faiths has in some cases a complex and troublesome history, such as in some religions in Asia. Many traditional Sacred Natural Sites have been appropriated or destroyed because they were considered pagan or idolatrous by newly emerging world faiths. In some instances religious buildings were forcefully superimposed upon traditional sites. As Jeanrenaud (2001) points out bluntly: “while it is important to guard against ‘demonizing’ the involvement of major faiths with indigenous and traditional peoples, it is important to acknowledge that the erosion of Sacred Natural Sites can be directly related to the expansion of the dominant faiths in many cases.”

Sacred Natural Sites as viable mechanisms for bio-cultural conservation: this project is to focus on Sacred Natural Sites that possess and combine both a spiritual/cultural significance and biodiversity value. This research project will consider Sacred Natural Sites on the basis of their contributions to biodiversity, regardless of their “naturalness” from different perspectives. The working approach therefore has a dual character in that it reflects cultural/spiritual features and environmental significance. The literature reviewed has also shown that Sacred Natural Sites’ conservation further promotes and is intrinsically associated with: indigenous and traditional peoples’ heritage, cultural identity, linguistic diversity, livelihoods, Traditional Ecological Knowledge (TEK) and human rights issues.

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“Jain cosmology recognizes the fundamental natural phenomenon of samsāra or mutual dependence. All aspects of nature belong together and are bound in a physical as well as a metaphysical relationship. Life is viewed as a gift of togetherness, accommodation and assistance in a universe teeming with interdependent constituent worlds.”

From “Jainism” in “The Assisi Declarations”
Sacred Natural Sites versus Sacred Sites of institutionalized religions: the differences

Antiquity of sites: many indigenous and traditional peoples’ Sacred Natural Sites may have their origins in prehistoric times (Box 12), whereas the sacred sites of institutionalized religions are a relatively modern phenomenon, many of them having been established only within the last few centuries (with the exception of some religions in Asia).

Perception of nature: indigenous Sacred Natural Sites are based in the inherent sacredness of nature, whereas the sacred sites of the world faiths often bestow their own particular religious symbols and beliefs upon nature.

Cultural clash: many traditional Sacred Natural Sites were appropriated or destroyed because they were considered pagan or idolatrous by some newly emerging world faiths, except for some religions in Asia. In some instances religious buildings were forcefully superimposed upon traditional sites.

Adapted and adopted from: Urennasan in “An International Initiative for the Protection of Sacred Natural Sites and other Places of Indigenous and Traditional Peoples with Importance for Biodiversity Conservation”

Box 12 Antiquity of Sacred Natural Sites of Indigenous and Traditional Peoples

Uvs Lake is the largest and most ancient land-locked sacred lake in Mongolia, situated at 743 meters above sea level. Uvs Nuur basin contains five biological ecosystems – gobi (cold desert), semi-desert, steppe, taiga, tundra, and glacier – within an ancient Central Asian lake basin spanning one hundred and sixty kilometers from north to south and six hundred kilometers from east to west. Within this limited area, habitats include flood-plain forests, salt marshes, mobile and fixed sand dunes, permanent snow fields, and deciduous and coniferous forests.

Uvs Nuur holds great historic treasures, never having been put into scientific and cultural circulation, which are many thousands of years old. All the mountain valleys contain Kurgans, ancient burial sites, creating a unique historical and cultural landscape.

Source: Norov Urennasan in “The Importance of Sacred Natural Sites for Biodiversity Conservation”

Why supporting the conservation of Sacred Natural Sites (SNS)

The literature reviewed shows that most Sacred Natural Sites are effective and viable conservation mechanisms on their own right. This assumption is based on the following evidence:

A.- Sacred Natural Sites conserve biodiversity

The literature reviewed shows that many Sacred Natural Sites of indigenous and traditional peoples are areas of great importance for the conservation of biodiversity: for indigenous and traditional peoples the reasons for protecting their lands, their spiritual connections, the earth and biodiversity are inseparable (Oviedo and Maffi 2000, Luque 2006). In most cases, a deep and well rooted sense of sanctity or sacredness, established and strengthened through several hundred years of contact with, observation of, and learning about the functions of a Sacred Natural Site, has assured the survival of such habitats in an almost pristine state due to self imposed restrictions in use and access (Box 13).

Box 13 The Holy Hills in the Yunnan province of China

Dai local people in the Xishuangbanna area of Yunnan have a long tradition of sacred forest conservation practices. In traditional concepts of the Dai, the “Holy Hill” (or Mang in the Dai language) is a forested hill where the gods reside. All the plants and animals that inhabit the Holy Hill are sacred living things in “gods’ garden”. The Holy Hills are sacred natural forests that are important visual elements on the modern Xishuangbanna landscape, and can be found whenever one encounters a forest hill near a Dai village. The Holy Hills play an important role in the conservation of the area’s biodiversity. Currently, they are about 250 holy hills in Xishuangbanna, occupying 1000 – 1500 has of land.

Indigenous and traditional communities respect the land as their mother and treasure what it provides as a source of livelihood and cultural worth. In Yunnan, cultures have evolved to provide means of managing the land and its natural resources in a sustainable manner, and customary laws have regulated access to and exploitation of resources for many centuries. The ecological effects of the Holy Hill forests in Xishuangbanna are primarily due to their role in protecting forestic biodiversity. Holly hill forests and sacred groves are key stepping stones for genetic exchange between biota. In areas with little forest cover, Holy Hill forests, sacred groves, and cemetery forests are important islands of biodiversity.

Source: Pei Shengji in “The Importance of Sacred Natural Sites for Biodiversity Conservation”

(i) The role of Sacred Natural Sites in protecting nature

The main objective of the traditional management of Sacred Natural Sites is to maintain their separateness or sanctity by controlling access to them and applying use restrictions. This is achieved largely through the strength of spiritual beliefs and social rules and norms. Active physical policing of sacred places by custodians has tended to be more the exception than the rule. More commonly, taboos and other religious observations have been applied, a sort of “spiritual police”, regulating access to a small circle of people and appropriate conduct at the sites, threatening dire punishment from the spirit world for those who flouted the rules. These have proven fairly effective in reinforcing self-restraint among individual members of the group (Githitho 2003). If a breach does occur, purposely or not, intervention or intercession by spiritual leaders would be required to ward off harm to the trespasser. As a consequence of their taboo status and access and use restrictions, most Sacred Natural Sites have served as important reservoirs of biological diversity, preserving unique and/or rare animal and plant species. The Kaya communities conform to this pattern (Githitho 2003) (Box 14)

Box 14 The Sacred Mijikenda Kaya Forest of Coastal Kenya

The sacred Kaya forests are situated on the coastal plains and hills of Kenya. They are residual patches (ranging from 10 to 200 hectares) of the once-extensive diverse lowland forest of Eastern Africa occurring within the Zanzibar-Inhambane Regional Mosaic. The Kaya forests are botanically diverse and have a high conservation value. The Kayas would seem to owe their existence to the beliefs, culture and history of the coastal Mijikenda ethnic groups.

According to oral traditions the forests historically sheltered small fortified villages of the various groups when they first appeared in the region ten generations or more ago (“Kaya” means homestead). The Kayas were preserved as sacred places and burial grounds by the Mijikenda, led by their ritual elders. Cutting of trees and destruction of vegetation around these sites was prohibited in an attempt to preserve the surrounding “kaya forest” as a screen or buffering environment for the Kaya clearings; indeed, and while the surrounding areas were gradually converted to farmland, the Kaya sites remained on the coastal landscape as forest patches of varying size and ritual significance. The most important part of the Kaya forest traditionally is the kaya itself, the central clearing. In a metaphysical and literal historical sense, the “home” of the community. This tend to be set at the centre of the forest. At a secret spot near the central clearing the fingo is buried, a powerful protective talisman of the tribe within came from their original home in the north. Burial sites were also associated with the central clearing, where generations of villagers were buried: their spirits still reside here. The graves of great leaders were kept somewhat apart and are also treated as shrines. Certain old trees and unusual landforms such as caves also have ritual importance.

Source: Anthony N. Githitho in “The Importance of Sacred Natural Sites for Biodiversity Conservation”

(ii) The value of Sacred Natural Sites for ecological research and protection

In some areas, Sacred Natural Sites are valuable sources of genetic material for rehabilitating degraded ecosystems and can serve as indicator sites in assessing the potential natural vegetation of degraded ecosystems. When and if, original vegetation is left "untouched" Sacred Natural Sites could eventually give an idea of the area’s climax or sub-climax vegetation (Oviedo and Maffi 2000, Jeaneena 2001).
Again, the literature shows that these sites have survived environmental destruction because they are deeply embedded in local cultures and traditional belief systems becoming sanctuaries for rare or endangered species (Box 15).

Box 15 The Sacred Caves of the Wind and Fertility in Mexico

The sacred caves are located in a relic of tropical forest in an almost pristine state. This type of vegetation has been greatly reduced throughout the Huasteca region and all that is left of it now is confined to remote areas where land use changes have been prevented so far. It is then in this context that the caves’ surrounding tropical forest is of vital biological significance since high deforestation rates due to agricultural and cattle grazing activities have converted the caves area into an “island of vegetation” amongst extended deforestation. Lastly, and most importantly, this is one of the last remaining areas in the Huasteca region where the local shamans can find the medicinal plants they require for their healing ceremonies. There are plans to expand the current protected area towards its eastern end where another punctual and pristine fragment of tropical forest can be found.

The Sacred Caves of the Wind and Fertility were officially decreed as Sacred Natural Sites due to their importance for the Tenek, Nahua and Pame Indigenous Peoples of the Huasteca region in the southeastern portion of the state of San Luis Potosí. These caves could be compared to a western “University” in the sense that it is in these caverns that traditional knowledge transmission rituals do take place. These caves do belong to a more extensive network of rocky formations, springs sources, cavern and coves that, all together, perform a central role in the cosmopolitan of the Huasteca indigenous peoples.

Source: Mercedes Otegui in “Conservation of Biodiversity Rich Sacred Natural Site”.

The spiritual connections between indigenous peoples and the earth are more than a reflection of traditional views on nature – they are also integral parts of ethnic identity (Jeanrenaud 2001, Luque 2006). In virtually every society, nature provides powerful symbols used to create strong links between the social and the natural worlds (Box 17). In this vein, Sacred Natural Sites can be very important reference places of cultural identity. A group of people, a tribe, or entire nations can relate to Sacred Natural Sites as their points of origin, the realm of their ancestors, their destinations of pilgrimage and worship, and overall, as the embodiment of their spiritual beliefs. If properly managed, these special places will contribute meaningfully to both the conservation of biological diversity and the maintenance of cultural identity.

B. Sacred Natural Sites support Indigenous and Traditional Peoples’ ways of life

Another working premise is that Sacred Natural Sites are important for the vitality and survival of indigenous and traditional cultures and other associated values. Some examples of this follow next:

(i) Sacred Natural Sites and Heritage

Heritage is that which identifies an individual or a collective group of individuals that have a common and shared value, which is significant and important in establishing and confirming self and group identity. This value exists in both tangible and intangible forms, be it places, spaces, objects, structures, actions, or thoughts and words. It can be identified as: rituals, customs, traditions, monuments, ancient and modern sites, cultural icons, music, literature, knowledge, and at last, Sacred Natural Sites. All of these trigger a series of emotional and physical responses that ultimately have an intrinsic, non-tangible value (Gündüz 2000).

Heritage is also a holistic entity that combines both culture and nature in the broadest sense: hence, a strong bond exists between human activities and natural landscapes, and this can be particularly seen in the interaction between indigenous and traditional peoples and their territories. This special association is reflected in the interaction that is engrossed on the natural landscape through social and cultural values which prompt the occurrence of Sacred Natural Sites (Gündüz 2000).

(ii) Sacred Natural Sites and Cultural Identity

According to various authors (Oviedo and Maffi 2000, Luque 2006, Teodo 2003, Schaff 2003, Jeanrenaud 2001) natural ecosystems cannot be understood, conserved and managed without recognizing the human cultures that shape them, since biological and cultural diversities are mutually reinforcing and interdependent. Together, cultural diversity and biological diversity hold the key to ensuring resilience in both social and ecological systems (Box 16).

Box 16 The Sacred Moli Snow Mountain (Khabadakpo) in Northwest Tibetan Prefecture of Yunnan Province in China

In Deq, local Tibetans believe that mountain gods, who live in the peaks, govern all the land, animals and people. Among all the sacred mountains, Mell Snow Mountain, the largest and highest, is of particular importance, not only for local Tibetans but for all believers of Mizzong Kagyu, one of the most important branches of Tibetan Buddhism. With a peak at 6,740 meters above sea level and a total of over two hundred square kilometers, it is ranked as one of the eight most important sacred mountains of the Tibetan plateau. Each year, thousands of believers embark on a pilgrimage to the mountain to worship offer sacrifices and to perform the Buddhist prayer practice of Zhanjing (walking around the mountain in a kora that usually takes one month).
**Box 17 State Sacred Mountains in Mongolia**

Mongolian people believe that each mountain, stream, river, spring, and lake has its own deity. This is illustrated by the proverb: “A mountain has a deity and water has a spirit”. Each river, mountain, hill and lake that makes up a homeland has a deity.

Most of the sacred sites in Mongolia though are sacred mountains and have well established systems of beliefs, legends and rituals and religious practices; their worshipping began during the Khunnu times by the first governing state of Mongolia, and this tradition continues to present day. Chingis Khan (Genghis Khan) first identified these sites as sacred mountains in the thirteenth century, and they were worshipped by his empire. Khenti Khan is the birth place of Chingis Khan.

Since 1990 it has become possible to revive national traditions and customs of nature protection in Mongolia, and to incorporate these traditions and customs into state policy. On 16 May 1995, the first President of Mongolia issued a new decree “supporting initiatives to revive the tradition of worshipping Bogd Khan, Khenti Khan, and Otpontenger mountains”. The decree pronounces the state’s support for initiatives to revive mountain-worshiping tradition as they were described in the original Mongolian Legal Document, “set out according to official decree” and adjusting traditions to present-day conditions. Since the summer of 1995, the three mountains have been worshipped as state sacred mountains.

*Source: Norov Urtnasan in “The Importance of Sacred Natural Sites for Biodiversity Conservation”*

Sacred Natural Sites are often focal points for social and cultural celebrations and religious and spiritual rituals, establishing social cohesion and solidarity within the communities (Jeenanraa 2001, Ramakrishnan 2003). In many indigenous and traditional communities, it is difficult to separate cultural identity, territory, kin and social relations, livelihoods, and Traditional Ecological Knowledge (TEK) from the ritualistic use of the land and protection of biodiversity – they are strongly interdependent. (Laque 2006, Jeenanraa 2001) (Box 18).

**Box 18 Tiburon Island: The Seri Spatially Definable Sacred Landscape, Mexico**

The Seri Territory is located in Northwestern Mexico, in the Gulf of California. The Gulf more than 900 beautiful islands and islets and isolated portions of the Sonoran Desert are considered living evolution labs. Except for Isla Tiburon, temporary dwelling of Seri Indians for many centuries, all these islands are uninhabited.

Seri traditional oral testimonies consider Taheöjc (Tiburón Island) a legacy from their ancestors, a place where the Seri cosmogenesis is embodied in each one of its natural features. Seri elders tell us that the Comcáac (Seri in the local language) were born out of Taheöjc. The Seri most beautiful folk stories are related to the spirits and deities associated with Taheöjc (mozi) (the heart of Tiburon Island). Taheöjc is a vital part of the Comcáac beingness, conforms their vitality as an indigenous group and is the axis around which revolves their cultural identity.

Without Taheöjc, the Seri would no longer exist. That simple, yet that irreparable. This is why Taheöjc is sacred for the Seri.

*Source: Mercedes Otegui in “The Importance of Sacred Natural Sites for Biodiversity Conservation”*

(iii) Sacred Natural Sites and Ethno-Linguistic diversity

The literature reviewed suggests a strong correlation between ethno-linguistic[1] and biological diversity (Box 19). Where many distinct traditional human groups live, there is also likely to be considerable habitat diversity with corresponding conservation and variety of both flora and fauna. In the year 2000, a ground breaking work conducted by Oviedo and Maffi resulted on a map in which a significant overlap is found to exist between the WWF’s Global 200 Ecoregions and the locations of indigenous and traditional communities worldwide. Hence, the authors concluded that the presence of such groups should be an important consideration for conservation actors to take into account in both the planning and implementation of conservation strategies.

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[1] ethno-linguistic group: it's excepted a human social unit that shares the same language and culture and uses the same climax to differentiate itself from other social groups (Oviedo and Maffi, 2000).

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**Box 19 Endemism in language compared with rankings of biodiversity (from Harmon 1998b)**

<table>
<thead>
<tr>
<th>Country</th>
<th>Endemic Languages</th>
<th>Endemic Vertebrates</th>
<th>Flowering Plants</th>
<th>Endemic Bird Areas</th>
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<tbody>
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<td>Nepal</td>
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<td>Colombia</td>
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<td>Canada</td>
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Toledo (2003) analyzes different sources and concludes that the listing of the 10 most bio-cultural-ly rich countries worldwide would follow this order: Indonesia, Australia, India, Mexico, Brazil, Zaïre, Papua New Guinea, Philippines, China and Colombia.

Oviedo and Maffi (2000) point out that conservation actors concerned about the loss of biodiversity should also be concerned about the loss of cultures and knowledge among indigenous and tradi-
tional peoples since these peoples hold knowledge on the vast amounts of ecological knowledge in their long history of managing the environment. Such knowledge is embodied in languages3; however, as languages become extinct, so associated Traditional Ecological Knowledge is lost. This happens because, in most traditional cultures, knowledge is not recorded but passed orally to other groups or new generations (Luque 2006). The loss of local languages means the loss of the main means of knowledge transmission.

According to the definition of ILO Convention 169, it has been estimated that there are at least 300 million people worldwide who are “indigenous” (Gray 1999); although indigenous peoples represent only about 5% of the world’s population, they are the largest portion of cultural diversity on earth. Combining these figures with the fact that indigenous peoples may occupy 20% of the world’s land surface (Martin 1993), helps us to better appreciate the significance of the diversity of indigenous cultures to the work of biodiversity conservation (Oviedo and Maffi 2000).

The literature reviewed concludes that success in conserving biological diversity is interconnected with the maintenance of cultural diversity on earth, and that, conversely, the loss of cultural divers-
ity is needs to be considered, together with socio-economic and political processes, as a factor leading to the current widespread biodiversity loss (Dasmann 1991; Gray 1991; Oldfield and Alcorn 1991; Shiva et al. 1991; Chapin 1992; Durning 1992; Nitschmann 1992; Castellana et al. 1993; Colchester 1994; Toledo 1994; Wilcox and Duan 1995; Alcorn 1997; McNeely 1997; Stevens 1997a; Posey 1999a; Maffi in press a, b; Toledo in press b) (Box 20).

Box 20 The Region of Xinjiang, Northwest China: a museum of world nationalities

The Xinjiang region – located in Northwestern China - is called the “museum of world nationalities” and the “museum of world religions” for its long history, mixture of minorities, and deep cultural associations. Xinjiang is home of 47 nationalities. Xinjiang, as the main section and hub of the Silk Road, became an important trading center for world trade: the flow and mix of people, the inter-exchange of nationalities both local and exotic, was responsible for the combination and mix of multi-dimensional cultures. The nationalities of the region have long-standing histories and cultures. Most of them have their own languages and alphabets, and they all contribute to its unique layered cultural diversity.

The region also harbors a rich biodiversity: Uyghurs, the local inhabitants, have long understood the importance of trees, considered the main protector of the environment and they have developed a custom of tree pro-
tection and propagation. There are many proverbs, folk poems, legends, and historic works referring to forest protection and afforestation, such as: “cut one tree and plant ten trees”; “the forest is a reservoir”. It can not only store surplus but also release water”; and “more forest more water”. Furthermore, Uyghurs have a tradition whereby they plant trees around their house when they first settle in their homes, considered to afford them protection. Uyghurs also worship ancient and old trees, which symbolize rain and peace, consequently many ancient and old trees are revered as sacred and are hence well preserved.

Source: Li Wenjiang in “The Importance of Sacred Natural Sites for Biodiversity Conservation”

3 The most reliable indicator of cultural diversity is the number of languages spoken in a given territory. Today, if every language were equally likely to be spoken by 1,000 people, we could easily identify the 3,000 most widely spoken languages. In reality, there are only 6,000, and only 30 of them have more than 200 million speakers each. The 80 that exceed 100 million speakers contain just 10% of the world’s population, and 20 of them contain an estimated 90% of the world’s speakers. The remaining 100 million people, who are mostly indigenous peoples, live in the remaining 100 languages.

(iv) Sacred Natural Sites and livelihoods

The literature shows that it is misleading to assume a complete ban on using natural resources associ-
ated with Sacred Natural Sites since many of them provide useful products for livelihoods. Often, respect for the sacredness in nature does not always mean that indigenous and traditional peoples take a “no-touch” approach to natural resources: indeed, resource use often depends on the degree of “sacredness” attributed by the community to the site and/or the species which is strictly regulat-
ed by local customs and traditional norms usually encoded in the communities’ Traditional Ecological Knowledge (Boxes 21 and 22).

Box 21 Sacred Groves on Savannah Ecosystems in Ghana

The Ghanaian Northern Region is a savanna area marked by widespread environmental degradation such as over-
grazing, bushfires, deforestation, agricultural expansion, village sprawl, and road construction. Amongst this gen-
eralized destruction, one finds small intermittent patches of forests with dense vegetation and closed canopies: they are the “sanctified groves” which have survived the degradation of the environment because of traditional belief systems: as abodes of gods and initiation places, they have been respected over the centuries by the local Dagomba tribe.

Studies of species inventories, analysis of the belief systems and the overall land use system were conducted with the prior consent of the local communities concerned in particular, the consent of village chiefs, community elders and hunters was sought. Based on the expressed needs of the local communities, afforestation using cash crops was carried out around the sacred groves. Fodder banks, woodland, and tree nurseries were established as a sort of “buffer zone” around the sacred groves, providing additional natural protection to the sacred grove itself.

Source: Thomas Schaff in “The Importance of Sacred Natural Sites for Biodiversity Conservation”

Box 22 Sacred Sites of West Timor

Embedded in their culture, the people of Dawan in West Timor protect a special landscape area for their sacred sites. These sacred sites are closely related to the presence of spring water, which is the principal reason for the conservation of these mostly forested areas (Naolai 2002; Poleng 2002). The sacred sites also provide other resources for their living needs (Naolai 2002, Waliyo 2003).

The high degree of endemic species found in these small sacred areas (1 to 2 ha) reveals the importance of relic spe-
cies and their contribution to the conservation of West Timor’s sacred sites. In fact, forests, Fatus, and other geographical formations such as limestone outcrops, small natural ponds and associated unique biota, caves, and other areas are under threat from deforestation and destruction because of the traditional knowledge associated with them. The Dawan people believe that their Ancestors or God created all Fatus to pro-
vide water for them.

Source: Herawanto Soedjito and Yohanes Purwanto in “The Importance of Sacred Natural Sites for Biodiversity Conservation”

(v) Sacred Natural Sites and Traditional Ecological Knowledge (TEK)

The value of Traditional Ecological Knowledge (TEK) in providing a long-term perspective of ecosystem dynamics, based on ancestral contact and interaction with habitats and species, has started to be recognized globally. This has a direct link to culture-based conservation practices of indige-
nous and traditional communities, including the establishment of Sacred Natural Sites. Such com-
munities have indeed a wealth of knowledge on the plant and animal species found in their Sacred Natural Sites in their territories as a whole, including aspects such as their nutritional and medici-
 nal properties and their role in maintaining species viability (Luque 2006, Oviedo and Maffi 2000, Toledo 2003).

Dealing with TEK may seem a straightforward issue of gaining a better understanding of local eco-
logical processes. Ultimately, however, it involves cooperation with and recognition of the rights of indigenous and traditional peoples. Transparency, credibility and a relationship of mutual trust are also key ingredients when dealing with TEK systems. An important step is to recognize indigenous and traditional peoples as the rightful custodians of this knowledge. This involves a two step process of establishing proper working relationships through protocol arrangements and following up with sup-
portive action. It must also be recognized that many indigenous and traditional peoples are strug-
gling to sustain their knowledge bases (Oviedo and Maffi 2000, Luque 2006).
Summary of Identified Characteristics of Sacred Natural Sites of Indigenous and Traditional Peoples

1. Sense of sacredness, awe, worshiping, benediction and respect associated with sacred entity
2. Identifiable spiritual/cultural authority in charge
3. Currently "under use": when compared to archaeological sites which may be sacred places though no longer in use
4. Limited access and restricted use usually linked to taboos and prohibitions related to resident deity/territorial myth
5. Occasional and sustainable contributions to local livelihoods
6. Sited on ancient "protected areas" in the world

(i) Sacred Natural Sites and rekindling the interest in the "Sacred"

Ideas of the spiritual and sacred are not new within international conservation. As Jeanneau (2001) points out "early conservationists were often inspired and awed by what they termed the wisdom of wilderness and the infinite capacity of nature to uplift the human spirit." Such values were frequently invoked and appealed to in the early protected areas movement. However, although the early conservation efforts were intended "for the benefit of mankind", as part of "the universal human heritage", the Sacred Natural Sites of indigenous and traditional peoples were either overlooked, or alienated from indigenous peoples as they were assimilated into parks biased towards western interests, or even destroyed (Jeanneau 2001).

Current international policy discourage on protected areas and the programmatic themes of international organizations (with the exception of the World Heritage and the Biosphere Reserve Programs of UNESCO) pay scant attention to intangible and spiritual values.

Timely enough and thanks to ground breaking initiatives such as that promoted by the World Commission on Protected Areas via its Task Force on Cultural and Spiritual Values of Protected Areas, there is a growing appreciation of the need to re-engage with the sacred within international conservation movement (Jeanneau 2001). This rekindling of interest in the spiritual within the international conservation movement does not preclude scientific knowledge or approaches but rather encourages the idea that nature can be contemplated in other ways that are more significant to people: in short, nature's many dimensions provides opportunities to engage with people in other meaningful ways (Jeanneau 2001, Putney 2003, Harmon 2001).

Hence, there is a need to make explicit the "intangible values" that impact the way we perceive, select, establish and manage protected areas without trying to force them into some sort of scientific, ethical, or economic framework. Indeed, it is hoped that an increased recognition of the full spectrum of intangible values (Box 24) in protected areas will generate increased public support and improve the process of selecting and managing them while opening an opportunity for the general public to appreciate the role performed by Sacred Natural Sites (Harmon 2003).

Box 24: Typology of Intangible Values according to the WCPO Task Force on Cultural and Spiritual Values of Protected Areas:

(ii) Recreational Values - the intrinsic qualities of natural areas that interact with humans to restore, refresh, or create awe through stimulations and exercise of the mind, body and soul (i.e., re-creation);

(iii) Therapeutic Values - the qualities of protected areas that offer gratitude to the territorial god, or territory, or sacredness natural in origin (i.e., re-creation);

(iv) Artistic Values - the qualities of nature that inspire human imagination in creative expression;

(v) Aesthetic Values - appreciation of the harmony, beauty, and profound meaning found in nature;

(vi) Educational Values - the qualities of nature that enlighten the careful observer with respect to human relationships with the natural environment, and with extension, people's relationships with one another, thereby creating respect and understanding;

(vii) Research and Monitoring Values: The function of natural areas as refuges, benchmarks, and baselines that provide scientists and interested individuals with relatively natural sites less influenced by human-induced change or conversion;

(viii) Peace Values - the function of protected areas in fostering regional peace and stability through cooperative management across international land or sea boundaries (transfrontier conservation areas) or as "intercultural spaces" for the development of understanding between traditional and modern societies, or between distinct cultures;

(ix) Therapeutic Values - the relationship between people and natural environments in protected areas that creates the potential for healing and for enriching physical and psychological well-being.

Source: Putney and Harmon in "The Full Value of Parks"
D. Sacred Natural Sites: finding the right policy context

(i) Protected Areas of Indigenous and Traditional Peoples: readdressing the status quo

Indigenous and traditional peoples’ Sacred Natural Sites fulfill similar functions as government-declared protected areas. Due to spiritual values attributed to these sites, access and use restrictions often apply, and such sites are therefore natural or near-natural ecosystems and biotopes where human-induced disturbances and impacts are minimal.

As stated since the very beginning of this discussion, Sacred Natural Sites in general constitute long-term conservation strategies, use simple and transparent decision making and administrative mechanisms, maintain a healthy and harmonic relationship with the surrounding reproductive spaces and operate at relatively low costs. In addition, they provide greater recognition of the communities’ communal land ownership, their collective rights of decision-making and control over the use of their natural resources.

Also as most Sacred Natural Sites are mostly community-based conservation areas, and usually fully in line with traditional belief systems and values, their protection tends to be more sustainable than established legally protected areas. Traditional custodians and local people often manage their Sacred Natural Sites in ways that have proven to be effective over long periods of time. These include local responses to local needs and environmental problem-solving maintaining livelihoods, sustainability and food security as well as the protection of indigenous knowledge and enhancement of cultural identity and capital.

The establishment of legally protected areas has often been met with opposition by indigenous and traditional communities. The concept of a legally designated and protected area is by and large a Western one, anthropomorphic in its core, and has not always been understood by indigenous and traditional societies (Colchester 1994, Alcorn 1994). Hence, the relationship between Sacred Natural Sites and traditional legally established protected areas has been one marked by conflict and mutual mistrust.

There are generally two situations surrounding the relationship between Sacred Natural Sites and protected areas. In most cases, Sacred Natural Sites have not received so far any recognition and support, and therefore are subject to many threats and pressures coming from poverty, population dynamics, degradation of neighboring environments, reduction of the availability of lands and resources for traditional peoples, and direct external factors such as illegal extraction of timber and wildlife, extractive industries’ operations, encroachment by outsiders, disrespectful tourism, etc. (Box 25).

Box 25 Ambondrome Sacred Mountain in Madagascar

Ambondrome is a sacred mountain for local people and a biodiversity hotspot for scientists. Fifteen thousand hectares of humid tropical forest shrouded in rare cloud forest cover its flanks between five hundred meters and the peak, 1,936 meters above sea level. Several springs are found on the mountain. Two centuries ago, a clan of noble families occupied the site, eventually becoming a stronghold for the Hova. Many Malagasy people today believe that this mountain is the prime refuge site for their souls after death. Largely as a result of its sacredness, it is a hypothesis that to date the forest remains undisturbed.

However, a rural road rehabilitation project undertaken a couple of years ago has opened the door to multiple new interests. There is immigration from other ethnic groups and growing interest from outside stakeholders. These people come in the search of new land, commercial wood, trade and mining opportunities as well as tourists. New stakeholders increase the area’s political complexity and enhance the risk of corrupt practices arising, increasing pressures on traditional cultural values and sustainable natural-resources uses.

In other cases, Sacred Natural Sites have been inadvertently or purposely integrated in legally declared protected areas, without recognition by government agencies of the traditional practices having sustained them, of the cultural significance of such places for inhabiting communities, and of the rights they have to continue being the managers of such sites and to be consulted about any action affecting them. This has resulted in mistrust and animosity, which apart from ethical considerations, creates obstacles to effective management of such sites and areas.

This research project embraces a more ample and flexible vision of protected areas that incorporates spiritual values within several current management categories; and especially important would be the recognition of the spiritual values associated with indigenous and traditional peoples’ Sacred Natural Sites and these sites viability and efficiency when it comes to bio-cultural conservation. The eventual designation of Sacred Natural Sites as an officially designated protected area management category in their own right could be instrumental in gaining support of indigenous and traditional peoples in conserving the environment and its natural and cultural manifestations. It is in this discussion that IUCN protected areas categories 5 and 6 could provide an initial stepping stone by explicitly mentioning Sacred Natural Sites in their definitions as a very initial step recognizing first their very existence (Box 26).

In Mexico, there is a ground breaking and positive precedent that was set by the state of San Luis Potosí Environmental Legislation back in 2001. It concerns Wirkuta, the Sacred Natural Site of

Box 26 IUCN Protected Areas Management Categories 5 and 6

<table>
<thead>
<tr>
<th>Category 5: Protected Landscape/ Seascape</th>
<th>Category 6: Managed Resource Protected Area</th>
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</thead>
<tbody>
<tr>
<td><strong>Objectives</strong></td>
<td><strong>Objectives</strong></td>
</tr>
<tr>
<td>To bring benefits for the local community through the provision of natural products and services</td>
<td>To provide a sustainable flow of natural products and services to meet community needs, without resulting in the decline of the area’s biological diversity</td>
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<tr>
<td>To maintain the harmonious interaction of nature and culture and the continuation of traditional use</td>
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<tr>
<td>To support lifestyles and economic activities that are in harmony with nature and the preservation of the social and cultural fabric of the communities concerned</td>
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<tr>
<td><strong>Management</strong></td>
<td></td>
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<tr>
<td>By a public authority or a mosaic of private and public ownership, operating a variety of management regimes</td>
<td>Ownership may be by government, community, private individuals or a combination of the above. Management may be provided through local custom, supported and advised by governments and NGOs</td>
</tr>
</tbody>
</table>

Source: Orihuela Maffi in “Indigenous and Traditional Peoples of the World and Ecoregional Conservation”
Huichol indigenous peoples in the Chihuahua Desert. It was back in 1994 that Wirikuta was first decreed as a “Site of Cultural and Historic Heritage and Area under Ecological Conservation of the ethnic group Wirrarika and of their sacred sites as well as their historical-cultural route to be located on the municipalities of Villa de Ramos, Charcas and Catorce” (Ecological and Cultural Reserve for short). It is important to mention that the reserve’s first boundaries were hastily agreed upon as to avoid the construction of a road that was to traverse the very heart of the Huichol sacred site. The reserve was then created to and succeeds in safeguarding the integrity of the Huichol Sacred Natural Site. A number of key adjacent areas tough, home of diverse and endemic flora, were left aside due to the hastiness that prompted this very first decree.

It was not until October 2000, which the reserve was to be re-decreed, under the very same category, and expanded from its original 73,000 Ha. to its current 140,211 Ha. in an effort to include those biodiversity components left aside on the first decree. In addition, 138.78 Km. of the Huichol pilgrimage route were to be protected under this new decree. It was finally on June 2001 that the reserve was re-declared as a Sacred Natural Site while keeping the very same boundaries.

The state’s environmental law is one of the most advanced and sophisticated in Mexico. As stated earlier, this environmental law has the uniqueness of taking into account the protection of natural sites sacred to the indigenous peoples that, like the Huichols, traverse or inhabit the state. Through June 2000 this quality was captured under the Ecological and Cultural Reserve category. From then on, the Sacred Natural Site official designation, captures the cultural and natural duality of a number of protected Sacred Natural Sites in the state, such is the case of the sacred caves of the Wind and Fertility in the Huasteca region.

(ii) Sacred Natural Sites and International Policy Processes

Several international policy processes and biodiversity conservation initiatives have promoted in the last decade a new and promising way of understanding the role of indigenous and traditional peoples in biodiversity conservation; these policies have also pointed to the need of recognizing the value of their traditional knowledge and practices as the basis for the establishment of constructive alliances resulting in equitable benefits for those communities and the humanity as a whole.

The Convention on Biological Diversity (CBD) is a key stepping stone in this process: Article 10 c) of the Convention encourages to: “protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements”. Article 8 j) of the same Convention states that each Contracting Party shall “subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practice”.

Particularly important among international policy processes are those linked to the International Labour Organization’s Conventions 107 and 169 on Indigenous and Tribal Peoples In Independent Countries (ILO 107 and 169), the already mentioned CBD, the Ramsar Convention for the Protection of Wetlands of International Importance (Ramsar Convention), the United Nations Forum on Forests (UNFF), the UN Convention to Combat Desertification (CCD) among others, as well as the recent establishment of the Permanent Forum on Indigenous Issues at ECOSOC. It is also relevant to mention that the 2010 Biodiversity Target seeks the “maintenance of socio-cultural diversity of indigenous and local communities” as per its Goal 9, while article (xii) c of the Global Strategy for Plant Conservation stresses the need to halt “the decline of plant resources, and associated indigenous and local knowledge, innovations and practices that support sustainable livelihoods, local food security and health care”.

Also relevant are policies of multi-lateral development institutions, particularly the operational directives and policies on indigenous peoples of the World Bank, the Inter-American Development Bank and the Asian Development Bank. Further, important benchmarks in this context are the declaration of the Second International Decade for the World’s Indigenous Peoples (1995-2004), the development of indigenous peoples’ international agendas driven by their own organizations and networks, and several well-established and recognized leadership initiatives such as the Indigenous Initiative for Peace (IIPP), the Indigenous Environmental Network, and the International Indigenous Forum on Biodiversity.

(iii) and Sacred Natural Sites conservation

UNESCO has at its disposal two global instruments that protect many of the world’s most important environmental sites: the Program on Man and the Biosphere (MAB) with its World Network of Biosphere Reserves, and the World Heritage Convention (WHC).

The Sevilla Strategy for Biosphere Reserves, an expert conference that took place in Seville, Spain, emphasizes the fact that “biosphere reserves should reflect more fully the human dimensions.
Connections should be made between cultural and biological diversity. Traditional knowledge and genetic resources should be conserved and their role in sustainable development should be recognized and encouraged (UNESCO 1996). Goal 2 of the Seville Strategy for the Mediterranean at the operational level to “establish, strengthen or extend biosphere reserves to include areas where traditional life styles and indigenous uses of biodiversity are practiced (including sacred sites) and/or where there are critical interactions between people and their environment”.

In 1972, the UNESCO general conference adopted the Convention Concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention). Reflecting an important conceptual development with regard to heritage sites, in 1992 the World Heritage Convention became the first international legal instrument to recognize and protect cultural landscapes; in many cases these are national parks, protected landscapes, or other categories or protected areas under national legislation. The category of the associative cultural landscape has been crucial in the recognition of intangible values and for the heritage of indigenous peoples. The Operational Guidelines of the convention stipulates in paragraph 39 (iii): “The final category is the associative cultural landscape. The inclusion of such landscapes on the World Heritage List is justifiable by virtue of the powerful religious, artistic or cultural associations of the natural element rather than material cultural evidence, which may be insignifcant or ever absent” (Schaaf 2003).

As Schaaf (2003) emphasizes, it was on the basis of this paragraph, that it was possible to nominate Tongariro National Park in New Zealand as a cultural landscape in 1993. In fact, Tongariro National Park had already previously been listed as a natural world heritage site, but only on the grounds of its “natural and environmental values”. The earlier listing of Tongariro had completely ignored the fact that Tongariro was the most sacred area for New Zealand’s Maori population. It was the Maoris themselves, with good reason, who insisted that this reductionist view be expanded by re-naming Tongariro for its value as an associative cultural landscape, expressing the religious and cultural associations the Maori have in the area. Accordingly, Tongariro became the first Sacred Natural Site to be nominated as a cultural landscape under the World Heritage Convention.

(iv) Sacred Natural Sites ground breaking national environmental policies

Several countries are in the process of examining the possibility of incorporating provisions for a more effective protection of Sacred Natural Sites in their national biodiversity laws and policies. A brief overview follows:

Africa

In Guinea Bissau, Article 6 of the Law of the Earth (Official Journal nº 5/98) identifies local communities as managers of their ancestral lands and states that local communities can act as managers of their lands – including Sacred Natural Sites - according to their customary law, as long as these belong to their traditional and historic lands. In addition, the National Biodiversity Strategy and Action Plan (NBSAP), currently under elaboration, aims to safeguard cultural and traditional practices compatible with sustainable use of resources. This goal is evident in the declaration by UNESCO in April 1996 of the Boloma Bijagós Biosphere Reserve, an archipelago of 88 islands. A long-term management plan for the reserve has been developed by the National Research Institute (INEP) and the World Conservation Union (IUCN) to create an enabling environment in which the Bijagós indigenous peoples will have control over their resources and the islands that they consider sacred (Box 27).

Box 27 The Boloma-Bijagós Biosphere Reserve in Guinea-Bissau

The Boloma-Bijagos is an archipelago of 88 islands that hold a high diversity of ecosystems with rivers discharging nutrient freshwater into the sea which resulting in very high productivity. This protected area was designated Biosphere Reserve in 1996 and amounts to a total of 102,230 hectares. Certain areas of the reserve, including mangrove systems, beaches and small islands have been considered as “sacred” and can not and have not been inhabited. Their natural resources have remained untouched and no economic activity has been allowed. The main role of these sacred sites is that of scenarios for initiation rituals: entrance to these sites is restricted to those having completed their ceremonial duties. The common element of these protection strategies is that the human presence has been reduced to its minimum expression. These traditional practices of keeping the skulls of their elders in caves and preserving such areas as small forest patches. The Taita skull caves are known as pango and are scattered all over Taita land; all exhumed skulls of the clan are kept in these sacred caves which are revered and conserved by clans and family members: cases of neglect, disrespect and even destruction of the sites are however on the increase. Due to their small size the forests are of little economic returns and this has contributed to receiving little attention both at the national and local institution level despite their uniqueness and high species endemism. Sadly, the cultural significance hardly features in biodiversity surveys. The forest department also lacks the necessary capacity (technical, equipment and financial) to manage and sustainably conserve the forests.

Source: IUCN EARO office in “Conservation of Biodiversity Rich Sacred Natural Sites: a medium-sized GEF proposal”

Latin America

It was in 2001 that Ecuador developed its National Biodiversity Policy and Strategy (NBSP 2001-2010). The NBSP has a provision on the role of indigenous peoples in protected areas as well as their rights in relation to lands and territories. It was also the 1998 Constitution that for the first time acknowledged collective rights. Indeed, Article 84 of Ecuador’s 1998 Constitution, pertaining to the rights of indigenous peoples, explicitly recognizes their ownership rights upon their territories as well as over their ancestral practices when it comes to the management of biodiversity. Article 62, introduces the theme of tangible and intangible cultural patrimony referring to Sacred Natural Sites when it notes that the state will “establish the adequate policy framework for the conservation, protection and respect of the tangible and intangible cultural patrimony, including the artistic, historic, linguistic and archaeological wealth of the nation that includes the whole of values and diverse manifestations constituting the national, pluri-cultural and multi-ethnic character of the state of Ecuador”.

In April 2003, the National Council on Indigenous Peoples and the Integrated System of Social Indicators of Ecuador produced a first report on Sacred Natural Sites and Indigenous Territories with the aim of setting up suitable national policies and establishing an integrated management strategy for the identified sites (Box 29).
The Cayambe area is located on the Eastern Range of the Ecuadorian Andes in the provinces of Pichincha and Imbabura. The upper lands of this area harbour three impressive snowy volcanoes, Cayambe, Sarahurco and Puntas. Situated along the continental divide, the Cayambe system includes the headwaters and tributaries of the major drainage systems in both eastern and western Ecuador. The strategic location and altitude range covered by these volcanoes calls for a wide variety of ecosystems that explain the rich diversity of climate, flora, fauna and landscapes found in the area: the Cayambe volcano slopes serve as nesting site of the emblematic Andean condor, in the brink of extinction in most of the Andean region.

The Cayambe area contains one of the richest ecological reserves of Ecuador – the Cayambe-Coca Ecological Reserve - an official protected area since 1970. The area of Cayambe has great spiritual significance to the Cayanpi and other peoples of the region, with several revered mountains, rivers and lakes; in particular, it contains three sacred sites of special relevance to the Cayanpi people: Pambamarca, Quito Loma and Puntayachil.

E.- Sacred Natural Sites: the challenges ahead

(i) Sacred Natural Sites and legally established Protected Areas

As stated earlier, this research project encourages the fact that that Sacred Natural Sites should be meaningfully integrated into existing protected area networks to enhance their protected status while supporting the traditional belief systems, the cultural heritage and the integrity of indigenous and traditional groups.

Asia

The National Biodiversity Strategy and Action Plan (NBSAP) of India covered the cultural and spiritual context associated with natural resources in two categories by: 1) recognizing the cultural and spiritual context associated with natural resources in its overall approach and most of the Action Plans at the level of State consider this component; 2) the NBSAP also has considered this issue as a crosscutting theme, the so-called culture and biodiversity. This report has highlighted key several issues such as: (a) threats due to new profligacy in traditions associated with sacred sites; (b) role of sacred forests in economic potential and sustainable utilization; and (c) need of attention towards sacred wetlands.

Legal spaces for protection and conservation of sacred conservation practices as well as community conservation areas are provided by various laws in India, the most important being: the Wildlife (Protection) Act Amendment 2002 and the Biological Diversity Act 2002. Under the Wildlife (Protection) Act Amendment 2002 the following provision is worth mentioning:

Community reserves - “The State Government may, where the community or an individual has volunteered to conserve wildlife and its habitat, declare any private or community land not comprised within a National Park, sanctuary or a conservation reserve, as a community reserve, for protecting fauna, flora and traditional or cultural conservation values and practices”. This provision, and for the first time in wildlife legislation, recognizes the need to protect traditional cultural values and practices that are favorable to conservation. This provision could help provide greater security to communities against external and internal threats, or against destructive changes in land use and it also helps in building institutional structures at the community level.

“Only with aroused personal and social values that embrace compassion for fellow beings and generosity for nature that is so generous to us, can we deal successfully with problems threatening survival of life on earth as we know it.”

Dr. George B. Schaller, wildlife biologist
Another major factor hampering effective conservation of the biodiversity contained in Sacred Natural Sites is the lack of appropriate laws and policies at the national levels. Globally, as mentioned earlier, ILO Convention 169 and international instruments relevant for biodiversity conservation, mainly the CBD, the Ramsar Convention, the CCD and the World Heritage Convention, have included considerations on the cultural dimension for indigenous and local communities. These global instruments have indeed a great potential to come in support of this objective, although a significant amount of work is still needed to raise the attention of policy makers to the issue, and to devise appropriate tools to address it. At the national level, some protected areas laws that have been updated in the last few years – as discussed above - do address this issue, but again specific regulations, policies and instruments don’t yet exist; in any case, learning from the few positive examples or at least including the issue in national laws would be greatly useful for other countries still in the process of developing or updating their protected areas legislation.

Despite the relevance of Sacred Natural Sites to biodiversity conservation and evidence of significant local level protection and management, their role has been widely overlooked by state agencies, conservation agencies, international conventions and legislation and wider civil society. While several activities have been carried out in recent years dealing with the protection of Sacred Natural Sites by various organizations, no substantial progress has been achieved globally. Nevertheless, the prevailing context suggests that there are opportunities to build commitment and to generate a creative network of partnerships in support of the initiative.

In the context of unequal power relationships, indigenous and traditional peoples frequently lack the means to promote their rights and responsibilities as stewards of their land and resources. They are often excluded from decision making processes which affect their lands, and they frequently lack information, organizational and financial support to develop and defend their interests (Luque 2006).

Conservation groups should recognize, together with cultural traditions and knowledge, the right of indigenous and traditional peoples to self development while recognizing their legitimate rights and interests. Indigenous and traditional peoples should be able to choose development options that are culturally determined from within and not imposed from outside (Oviedo and Maffi 2000). As the authors conclude: “There is a need to secure the rights of indigenous and traditional peoples to control their lands, waters and resources, and to build their capacity to effectively manage and monitor biological resources to ensure biodiversity conservation”. This affirmation is extrapolated to the context of Sacred Natural Sites and there is an evident need to strengthen democracy, good governance and adherence to the rule of law while recognizing indigenous and traditional peoples right to ownership and management of such sites. There is hence a need to combat discrimination against indigenous peoples’ spiritual and religious practices associated to their Sacred Natural Sites and their associated rites.

For example, in the Mesoamerican region, indigenous groups have been historically dominated by the “mestizo” population and the ruling class, and have been generally excluded from the mainstream of social, economic, and political activity. Reports of discrimination against indigenous spiritual practices must be viewed in the context of this widespread mestizo rejection of indigenous cultures often describing traditional religious and spiritual practices as “witchcraft” or “devil worship”. The Catholic Church in particular implemented, from the early days of the European context until recently, aggressive policies for the “extermination of idolatries”, in the form of open persecution to indigenous peoples’ spiritual values and practices. This resulted in the destruction of many Sacred Natural Sites.

There is a widespread lack of capacity in the different stakeholders involved in Sacred Natural Sites conservation: while communities were traditionally well endowed to conserve and manage their own sites, the current context of threats and cultural change makes many of them insufficiently prepared to face the challenges. On the side of government agencies in charge of biodiversity conservation and protected areas, the indicated factors have determined a general lack of understanding, information, skills and tools to work with communities in protecting sacred natural sites while strengthening their own cultures and enhancing their conservation potential.

The now extinct People and Conservation Unit of WWF International led the way in promoting a growing understanding that human rights issues and environmental problems are strongly linked. It even produced a valuable statement and guidelines to be followed by the institution when working with indigenous and traditional peoples. Ever since, the work of conservation organizations like IUCN has shown that the lack of indigenous peoples’ rights is related to biodiversity conservation problems and vice versa: hence it is no longer morally or technically feasible to separate human rights and environmental issues as two unrelated concerns (Oviedo and Maffi 2000).

As the authors conclude: “There is a need to secure the rights of indigenous and traditional peoples to control their lands, waters and resources, and to build their capacity to effectively manage and monitor biological resources to ensure biodiversity conservation”. This affirmation is extrapolated to the context of Sacred Natural Sites and there is an evident need to strengthen democracy, good governance and adherence to the rule of law while recognizing indigenous and traditional peoples right to ownership and management of such sites. There is hence a need to combat discrimination against indigenous peoples’ spiritual and religious practices associated to their Sacred Natural Sites and their associated rites.

There is a key legal precedent supporting the cause of the indigenous human rights field in the Mesoamerican region was set by the Inter American Court of Human rights vis a vis the case of the indigenous community of Mayagua Awas Tingmi against the state of Nicaragua. The court stated that “indigenous peoples have the right to live freely in their own territories: the close connection that they maintain with their lands must be recognized and understood as the fundamental pillar supporting their cultures, their spiritual life, their social integrity and their economic survival.” (American Court of Human Rights).

There is a widespread lack of capacity in the different stakeholders involved in Sacred Natural Sites conservation: while communities were traditionally well endowed to conserve and manage their own sites, the current context of threats and cultural change makes many of them insufficiently prepared to face the challenges. On the side of government agencies in charge of biodiversity conservation and protected areas, the indicated factors have determined a general lack of understanding, information, skills and tools to work with communities in protecting sacred natural sites while strengthening their own cultures and enhancing their conservation potential.

Other relevant stakeholders, such as conservation NGOs, religious institutions, international cooperation organizations, etc., have similar deficiencies, as they have not generally confronted the issue and have paid little attention to it. In contrast, there is an array of interesting resources for capacity building in some academic circles, indigenous and community organizations, and some organizations that have started to compile information and to learn from experience and good practice. Undertaking capacity building seems therefore a fundamental need, for which international frameworks and tools can be useful, but that has to take place essentially at national and local levels.

Globally, and judging from existing reports, Sacred Natural Sites must amount to several hundred-thousands in the world, and although generally small in size, as a whole they represent a significant area of land and water. Although current literature refers to the high biodiversity value of many Sacred Natural Sites, quantitative and scientific data on their global biodiversity significance doesn’t exist, and no systematic inventories have been carried out to fill this gap. UNEP’s World Conservation Monitoring Centre (WCMC), for example, has recorded some Sacred Natural Sites, but its database is far from exhaustive; even at the national level, there is no systematic information on the matter, and literature that documents Sacred Natural Sites in a more detailed way from a conservation perspective is only emerging recently. Therefore a large information and documentation gap exists, constituting a major obstacle to ensuring support and effective management of biodiversity rich Sacred Natural Sites.
Conclusion

The management conditions of most Sacred Natural Sites are difficult as they face many challenges and have little resources to address them, all the more so considering the lack of enabling environments legally, politically and institutionally.

There is therefore an evident need for effective action to support the preservation and effective management of Sacred Natural Sites that will have a large impact on enhancing biodiversity conservation, as well as on the long-term vitality of the cultures that created them.

The preceding analysis leads to the conclusion that a multi-faceted and strategic approach is required in order to effectively contribute to the protection of Sacred Natural Sites’ biodiversity, related cultural and spiritual values, TEK and belief systems. The best approach seems to be one where an enabling environment is pursued, globally and nationally, so that all actors involved in biodiversity conservation recognize the value of the issue and are prepared to mobilize resources and efforts to support it.

Based on the preceding analysis and the literature reviewed, this research project recommends that a cohesive strategy pursuing the conservation of Sacred Natural Sites should include as targets the following components:

(i) **Strengthening legal and policy frameworks**: to promote and improve the laws, policies, instruments and institutions that are to enable the protection and long-term management of Sacred Natural Sites, on the basis of principles that respect the human and cultural rights and interests of the respective communities.

(ii) **Building up on the body of information and knowledge**: as the basis for action to increase the level of awareness of the conservation community including government agencies. There is an evident need to register, document, recognize and support those existing Sacred Natural Sites establishing a global registry of such places, based on their voluntary disclosure and prior informed consent.

(iii) **Improving and supporting capacity building**: for indigenous peoples’ institutions to protect and sustainably manage Sacred Natural Sites while building up strategic alliances between public and private institutions and indigenous and traditional peoples.

(iv) **Broadening the availability of lessons and field-tested tools**: from improved management of selected case sites while developing field-tested tools that can be further applied nationally and locally, as well as potentially worldwide.

There is therefore an evident need for effective action to support the preservation and effective management of Sacred Natural Sites that will have a large impact on enhancing biodiversity conservation.
CHAPTER 3: Research Context

Why Mexico?

(i) Biological and cultural diversity

It is in this challenging global context of growing appreciation of Sacred Natural Sites contribution to environmental and cultural protection that Mexico - one of the most biologically and culturally diverse countries in the world- is amongst those nations examining the possibility of incorporating provisions for the protection of Sacred Natural Sites in their national environmental laws and policies.

Mexico is considered a biologically megadiverse country, with approximately 10% of living species. It is one of the top five countries in species richness of vascular plants and of vertebrates such as mammals and reptiles. Levels of endemism are high, often similar to those of island countries, ranging from around 10% for birds to more than 60% for amphibians and some groups of plants (Mittermeier et al. 1997; cited by Ceballos). In terms of ethnic diversity, Mexico harbours at least 62 different indigenous peoples* (to home America’s largest population of indigenous communities – Toledo 2003) or, using ethnolinguistic criteria, around 230 endemic indigenous languages 17.

According to Toledo (2003) there are 26 identifiable indigenous regions in Mexico, most of them in the center and south, in some 800 municipalities and occupying every major environment. Moreover, distribution of the indigenous population follows well defined patterns with regard to the main ecological zones; 90% are in wooded regions and only 10% in arid and semiarid areas with shrub-like vegetation or pasture lands.

Despite much speculation about Mexico’s un tapped resources, most scholars agree that the country’s great biological and cultural diversity stems from another equally important feature: its ecological heterogeneity, equaled only by countries like India, Australia and Peru. The reason for it is the country’s geographic location and particularly, the extraordinarily complex relief, where several mountain chains containing a dozen or so volcanoes of a 4 000 meter plus altitude interpose with enormous highlands and broad sea-level planes (Toledo 2003).

Mexican conservationists are increasingly aware of the validity of using a combined natural/cultural approach as a conservation tool in areas in abundance of both traits. Successful experiences, already having taken place in Mexico, constitute key conservation precedents at the national and international levels. The viability to include Sacred Natural Sites as a management category in the nation’s environmental laws has already prompted a constructive debate among the country’s federal and state authorities, indigenous and traditional peoples, and conservation agencies.

Several protected areas in Mexico include Sacred Natural Sites within its boundaries a fact that is not surprising given the above described natural and cultural diversity. None of these reserves though had, upon their creation, the explicit mandate of protecting the area’s both natural and cultural components but were rather created under a biodiversity conservation biased premise. Those reserves that do capture Sacred Natural Sites’ care on their management plans have conceptualized these sites as yet another “factor” to be dealt with rather than being a main axis permeating the management plan goals. 19

Policy Context

Following from its ratification of the CBD in 1993, Mexico developed a National Biodiversity Strategy and Action Plan (NBSAP) in year 2000. One of the strategic priorities of such plan is to establish policy guidelines for Mexico to follow to assess the real value of protecting the country’s rich biodiversity. This priority highlights the importance of the concept of “national culture” and among its most important actions one reads “integrating in awareness raising materials the historic and present values of the country’s indigenous and local communities, especially those values related with these peoples ancestral respect and deep relationship with nature as well as their deep sense of interdependence and sense of belonging to a whole that is nature”. 20

It is also relevant to point out that the agrarian communities of Mexico own the legal rights to their lands and natural heritage. Within the community, legal instruments exist that endorse the decisions taken by the communities’ maximum authorities, the General Assembly. These instruments are known as the communal statutes which in turn are legally endorsed by the political constitution of Mexico and recognized by the agrarian authority in each state.

Toledo (2003) remarks that the area under indigenous custody is estimated to be at least thirty million hectares. Indigenous peoples are the owners and usufructuaries of around 80% of the country’s forests and jungles. That makes Mexico the world’s most important laboratory in experimental communal forestry management and potentially, for Sacred Natural Sites management. In addition, the country’s principal biological and genetic deposits are in the hands of indigenous communities – particularly those that are part of or have strong ties to the territories of Sacred Natural Sites as well as the territories of the so-called “Pueblos Indígenas 2001-2006”. Mexico D.F.

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**“The prophecy of the Buddha says, most truly, that this snow mountain is the navel of the world, a place where the snow leopards dance. The mountain-top, the crystal-like pagoda is the white and glistening palace of Demchog… This is the great place of accomplished yoguis… There is no place more wonderful than this; there is no place more marvelous than here”.**

**“The Hundred Thousand Songs of Milarepa”**


19 The Pinacate and Great Desert of Altar Biosphere Reserve consist of this management plan (the Papago) indigenous group sacred sites.

20 Mexico’s NBSAP
peoples; that is, the areas containing the most plant and animal species, fungi and other organisms, as well as those that still conserve the most genetic varieties (germplasm). For example, 60% of the areas in central and southern Mexico recognized as preferential by the National Commission for Knowledge and Use of Biodiversity (CONABIO) are territories of indigenous communities; and most of the country’s biosphere reserves are overlapped or surrounded by lands belonging to indigenous communities or communal farmlands (Toledo 2003).

For example, the successful experiences of community protected areas in the state of Oaxaca, where a group of communities organized themselves as to protect their natural and cultural resources, are amongst the examples which are beginning to turn the attention of the Mexican environmental authorities into looking in more depth towards these communal experiences. The National Commission ofProtected Areas (CONANP), dependent on the Ministry of Natural Resources (SEMARNAT), is slowly beginning to recognize and acknowledge the importance of indigenous and community protected areas in the country’s biodiversity conservation. When it comes to the conservation of Sacred Natural Sites, the examples of their effective and long-term conservation, especially in the state of San Luis Potosí, have added to this increasing acknowledgment by CONANP officials of their value as effective and viable conservation mechanisms.

As discussed earlier, the case of the state of San Luis Potosí is indeed worth mentioning in the Mexican national environmental policy context given its uniqueness. In June 2001, the state government passed a landmark environmental law for the protection of natural sites sacred to indigenous peoples that dramatically expanded the Wirikuta Sacred Natural Site—the first protected area in Mexico explicitly designed to conserve the area’s Sacred Natural Sites—of the Huichol indigenous group—as well as the rich biodiversity of the Chihuahuan Desert, a WWF 200 global ecoregion. In addition to Wirikuta, the Caves of the Wind and Fertility in the very same state were also decreed as Sacred Natural Sites of the Pames, Nahua, and Tenek indigenous peoples.

CHAPTER 4 – Developing a methodology and tools

Introduction

Sacred Natural Sites can be considered an expression of Mexico’s biological and cultural richness. To date and despite many external threats and challenges, many of them still show resilience and continue to protect natural, cultural and spiritual values of the communities. However, little is known about their number, distribution, owner/manager communities’, natural, cultural and spiritual characteristics, state of conservation, management approaches, legal status, most pressing threats, etc. It is also presumed that many formal protected areas in Mexico include sacred sites within its boundaries.

As stated above, such gaps of knowledge do not allow for an appropriate planning, action and support for the conservation and sustainable management of Sacred Natural Sites, and many of them are bound to disappear before they are known or registered.

The situation of most countries in the world is not too different from that of Mexico regarding the lack of knowledge on Sacred Natural Sites. Therefore, there is an evident need to register, document, recognize and support those existing Sacred Natural Sites currently lacking support and exposed to innumerable threats. In the case of those sacred sites falling within protected areas, these should recognize the cultural and spiritual dimension of such sites, and the rights of the communities concerned to continue using and managing them as places for their cultural and spiritual realization and reverence. In both cases, effective action in support of Sacred Natural Sites would have large impact on enhancing biodiversity conservation.

In response to this knowledge gap, experts participating at the Vth World Protected Areas Congress (2003) and other meetings have reiterated the usefulness of building up registries of sacred natural sites, based on voluntary disclosure and informed consent of their traditional owners and managers.

Amongst the key international conservationist stakeholders, IUCN has been particularly sensitive about such requests. Among other actions, it has established a project for the support of Sacred Natural Sites of indigenous and traditional peoples worldwide, one of whose proposed tasks is to support the establishment of a global registry of such places, based on their voluntary disclosure and prior informed consent.

It has to be noted that building up such registries is not a simple task. On the one hand, all the concerned communities need to be contacted, informed, consulted, and their consent sought; on the other hand, appropriate tools and methodologies are needed—from consultation and consent protocols to classification criteria and matrices. All such tools and methodologies need to be developed—although some existing instruments could be adapted for this purpose.

Mexico, due to its cultural and biological richness, the Sacred Natural Sites it contains (some of which have been already documented), and its experience in protected areas and other conservation strategies, as well as in studying indigenous cultures, is a very appropriate country for developing and testing a methodology and tools for inventorying Sacred Natural Sites.

Benefits of this research project

Being the first systematic approach at the national level to develop, test and implement a methodology and tools for inventorying Sacred Natural Sites the project will serve as an instrument to increase the understanding of the value of such sites and the need for their protection. This will in turn: (i) empower indigenous and local communities of the country with key information that will allow them to devise better strategies and tools to protect their sacred sites, and to gain support from national and international agencies to that end; (ii) provide a tool for relevant national conservation authorities and agencies to assess the importance of such sites and their distribution, and discuss their future viability within and outside protected areas networks; (iii) contribute to the creation of a national enabling environment to ensure the protection of Sacred Natural Sites, by increasing awareness amongst the stakeholders relevant to their conservation and the general pub-
lic; (iv) offer indigenous and community organizations, the conservation community, and other actors of the country a methodology and set of tools they could use to increase the availability of information at the national level; and (v) offer also the opportunity to link the information collected to worldwide databases aiming at similar objectives of protecting Sacred Natural Sites (i.e. WCMC), based on communities’ voluntary disclosure of information.

Proposed Framework for developing a methodology and tools

The proposed framework for implementing the methodology and tools is divided into 5 distinct phases (Box 30):

Evaluation Phase: leading to a situational analysis; Determination of the potential distribution of Sacred Natural Sites applying different criteria on a GIS-based methodology; Prospecting phase in the field and eventual Inventorying of those Sacred Natural Sites identified; Information compilation; Results’ dissemination.

In each of these steps the methodological steps and tools to be used are identified and explained, together with the key stakeholders participating in each step. The time invested in each phase is also specified together with those benchmarks monitoring and validating an efficient progress and the eventual completion of the implementation of this framework.

Implementation of the framework

Step 1.- Evaluation Phase

Methodology

This phase is crucial for determining the status quo of the object of the research, in this case, Sacred Natural Sites. A careful review of all existing bibliography is a must especially in a relatively new research subject such as the case of Sacred Natural Sites, a review that shows, among other things, that there is not a widely accepted and consented upon definition of the term per se.

In this evaluation phase useful evaluation information can also be generated by conducting individual interviews to all those key stakeholders identified as relevant for determining this status quo: these interviews will be conducted by using ad hoc questionnaires as guides for each of the individuals interviewed.

The interviewing process intended to explore and cover stakeholders’ knowledge, feelings, attitudes, opinions, past experiences and expectations for the inventorying and conservation of Sacred Natural Sites. These interviews hence were aimed at discovering elements of the insiders’ perceptions of the topic under investigation, which were likely to be almost unknown to the interviewer. The results will vary depending on the interest of the individual interviewed and the priority he/she assigns to the subject discussed, as it will be seen later in the collected questionnaires.

The chosen methodology for conducting these personal interviews was that of “open ended” interviewing (versus close-ended) due to the special nature and sensitivity elicited by Sacred Natural Sites. Hence, the open ended interviews conducted were based on a sequence of questions organ-

### Box 30: Proposed Framework for Developing a Methodology an Tools for Inventorying Sacred Natural Sites in Mexico

<table>
<thead>
<tr>
<th>Methodological Steps Proposed</th>
<th>1.- Evaluation Phase leading to a situational analysis</th>
<th>2.- Potential Distribution of areas for SNS Phase</th>
<th>3.- Prospecting and Inventorying Phase</th>
<th>4.- Information Compilation Phase</th>
<th>5.- Results dissemination Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tools to be used</td>
<td>- Bibliographical review</td>
<td>- Coarse Filter Criteria (see discussion for details)</td>
<td>- Fine Filter Criteria (see discussion for details)</td>
<td>- Excel Database</td>
<td>- Guidelines on how to apply the methodology Webpage - Publications Bullets - Magazines</td>
</tr>
<tr>
<td>Key stakeholders involved</td>
<td>Government Representatives; Indigenous Cultural Research Academic Representatives; Conservation Actors; GIS specialists; Researcher(s);</td>
<td>Conservation Actors; GIS specialists; Researcher(s); Government Authorities; Researcher(s); Indigenous and Traditional Rightful Representatives; Researcher(s); Data base expert; Indigenous and local rights reps; Government Reps.</td>
<td>Indigenous and Traditional Rightful Representatives; Researcher(s); Data base expert; Indigenous and local rights reps; Government Reps.</td>
<td>Different levels at the national and international level (see discussion below for details)</td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>2 months</td>
<td>12 months</td>
<td>2 months</td>
<td>6 months</td>
<td></td>
</tr>
<tr>
<td>Benchmarks</td>
<td>Questionnaires completed and evaluated Protocol developed and ready for implementation</td>
<td>Extensive GIS maps produced and final map detailing potential distribution of SNS resulting from applying coarse and fine filters established criteria</td>
<td>SNS information captured MOU accorded upon and implemented GIS map constructed and coordinated with government reps, participating in project</td>
<td>Standardized on registered SNS</td>
<td>Assesment criteria established</td>
</tr>
</tbody>
</table>


ized by thematic sections whose answer elicited a richer response than a plain “yes” or “no” statement or a categorical judgment such as “good” or “bad”). Open-ended interviewing is thus a powerful means to catch “qualitative information”.

Choosing the proper respondents – the so called stakeholders - is a crucial element of open-ended interviewing. The sampling of respondents for open-ended interviews is based on judgmental (purposeful) criteria rather than random chance. Given the nature of the process, the power of purposeful sampling lies in selecting information-rich cases for in-depth analysis related to the central issues being studied. Some respondents will be selected because they have special knowledge about the topic of the action research - they are key informants. It also helps if they are ready to talk and they are somewhat reflective or analytical in their thinking. Other respondents will be selected for their representative status as members of different interest groups, or on the basis of any special social status accorded to them, either formally or informally.

Lastly, the success of the open-ended interviewing depends very much on the communication skills of the interviewer, which are needed to keep the discussion as a relaxed dialogue. These skills include helping the interviewee feel at ease, phrasing questions in clear but not leading ways (i.e., not suggesting the ‘correct’ or ‘expected’ answer, as in the question “Do you believe that the protection of Sacred Natural Sites is good for your community?”), and introducing probing questions appropriately (e.g., asking for further details when respondents give general answers).

Confidentiality can be an issue for some participants. The very nature of the interview process, especially qualitative open-ended interviewing, can result in respondents disclosing information which they would prefer to keep confidential (i.e., they want the information revealed but not the source of the information). It will be important for the interviewer to respect such wishes if they arise, more so when interviewing indigenous and traditional communities on their Sacred Natural Sites.

**Stakeholders selected for open-ended interviewing step**

Governmental authorities: protected areas and cultural/inigenous agencies. This research project can be promoted as a space for the exchange of opinions on how to improve existing decision making structures in governmental agencies vis-à-vis the management of natural and cultural resources.

National conservation organizations representatives: leading the conservation efforts in the field with or without experience in the subject matter. While international and national organizations may be willing to engage in ground breaking conservation approaches, it may be hard to obtain the same level of participation in local institutions.

Academic representatives: who might have conducted or are interested in engaging in research on this particular topic.

 Indigenous and traditional peoples organizations representatives: with a first hand knowledge of the studied subject. Some organizations will have a focus on internal issues while others may be involved in both national and internal lobbying. In some communities, difficulties in identifying the appropriate interlocutors for Sacred Natural Sites inventorying will not arise. There will be a clear agreement about who are the community authorities on sacred issues (i.e. Council of Elders). However, it may also be the case that in some other communities it may be a little more difficult for the researcher to be clear about the most appropriate people to consult and work with as Sacred Natural Sites informants.

Some respondents will be selected because they have special knowledge about the topic of the action research - they are to be key informants.

**Tools**

**Questionnaires**

Ad hoc questionnaires were developed for conservation and cultural governmental authorities, national conservation organizations representatives, academia representatives and indigenous and traditional peoples organizations’ representatives. Given the fact that the interviews were conducted in a Spanish speaking country, some of the answers are recorded in Spanish.

The following is the sample questionnaire used for protected areas authorities. The templates and answers for all questionnaires collected are to be found in Annexes 1, 2, 3, 4 and 5. The variety of examples included show clearly the degree of interest of the different interviewees - in despite of the interviewer skills - in answering their respective questionnaires which ranges from a clear to a quite poor interest in the subject matter.

**Sample Questionnaire for Protected Area Authorities**

**Basic Information**

- Name of the agency:
- Name and position of person answering the questionnaire:
- Date of the interview:
- Contact Information:

**Sacred Natural Sites**

- Are you familiar with the concept of Sacred Natural Sites?
- If the answer is yes, what would be your definition of a Sacred Natural Site?
- Are you familiar with the concept of bio-cultural conservation?
- If the answer is yes, would you favor the implementation of this conservation model in Mexico?

**Sacred Natural Sites and Protected Areas**

- Are you aware of the existence of Sacred Natural Sites within the boundaries of legally protected areas in Mexico (at the federal, state, municipal, private levels)?
- If the answer is yes, does the management plan of any of the reserves contemplate the management of these sites?

**Protected Areas Legislation**

- Does the current protected areas policy contemplate the cultural/spiritual aspects of such areas?
- Would you be in favor of promoting Sacred Natural Sites as management category in its own right?

**Research Project on Sacred Natural Sites**

- Do you think it would be useful inventorying Sacred Natural Sites?
- If the answer is yes, will the research product or process be of any practical benefit or use to your department?
- Could it be detrimental in any way? If the answer is yes, Why?
- Has your agency conducted a research exercise of this nature?

**Building Capacity**

- Do you consider yourself and/or your staff trained to cope with the management of Sacred Natural Sites?
- If the answer is no, would you be willing to undertake capacity development courses?

**Documentation**

- Is there any written information available on your organization work on bio-cultures issues and/or Sacred Natural Sites? If yes, please elaborate on format, lessons learned, etc.

**Are the right questions being asked? What else would you consider vis a vis Sacred Natural Sites Conservation?**

- Please elaborate

**Thank you for your collaboration!**
Proposed Protocol for Inventorying Sacred Natural Sites

Protocols are essentially guidelines to foster positive and mutually-beneficial working relationships by promoting good, ethical and responsible research as well as equitable exchanges among the communities and institutions/individuals conducting the research: they also identify those issues that should be of concern during the implementation of the research project: hence, all stakeholders must honor mutually agreed upon ethical concerns and obligations.

This research project encountered a wide diversity of situations – cultural, social, political, economic and geographic – in which indigenous and traditional peoples live thus acknowledging that the development of a draft Protocol requires a flexible, adaptive and sensitive approach in trying to come up with a set of recommendations to be universally applicable. It is recommended that researchers find out about details of local protocols from a range of sources, including individuals and local and regional community organizations.

Additionally, protocols are dynamic: they change and develop over time in response to internal and external factors. It is important for researchers to be sensitive to, and accommodating of, such changes by building long term, ongoing relationships with the indigenous and traditional communities. Some communities have already developed protocols they wish researchers to follow: in these cases, these local documents will be more relevant.

The protocol (Box 31) drafted for this project is intended for implementation in the context of a cultural research project, in this case, the inventorying of Sacred Natural Sites.

In the light of the diverse circumstances, each recommendation in this draft Protocol is classified into one of three categories following the example set by the “Proposed Guidelines for Researchers and Local Communities Interested in Accessing, Exploring and Studying Biodiversity”: (i) actions all ethical researchers must carry out; (ii) actions that are usually, but not always appropriate; and (iii) actions that are sometimes but by no means generally appropriate. The differences in between these categories are as follows:

Some recommendations are to be universally applied. For example, few would disagree that all researchers must reveal their methods and objectives to the local people on whose territories they are proposing to work. The preface on descriptions of these actions begins with: “researchers must”.

Some actions appear to have wide but not invariably applicability. In such circumstances the recommendation is prefaced with the phrase “researchers should”. Finally, there are actions that are clearly required of ethical researchers in some circumstances but not in others. For example, monetary compensation is often appropriate for those who provided valuable knowledge or access to research sites. Sometimes, however, such compensation is refused. Here the recommendation would be prefaced with the phrase “researchers should consider”.

**Box 31 Proposed Protocol for Inventorying Sacred Natural Sites**

The following recommendations are meant to ensure clarity and fairness in the relationship between: (i) the researcher and his / her supporting institution and possible funding sources; and (ii) the hosting indigenous and traditional community including the community members serving as sources of information to the researcher as well as any other indigenous and traditional entities as may be stipulated.

1) **Approval** In most cases the researchers should obtain clearance from the appropriate central or state government authority and, where applicable, from institutions representative of indigenous and traditional peoples.

2) **Initial Disclosure of Information** When first contacting a community or individual to seek access, the researcher:

   - should carry out all communications in the locally understood language;
   - must explain the nature and purpose of the proposed research, including its duration, the geographic area in which research would take place, as well as the inventorying methodology and tools;
   - must explain the foreseeable consequences of the research for the indigenous and traditional community, including any potential for commercial value in the research activities involved;
   - should explain the potential non-commercial values, such as academic recognition and advancement for the researcher and his/her institution and/or funding institutions;
   - should explain any social and cultural risks given the sensitive nature of the research;
   - must notify the community at large by appropriate traditional means, e.g., public meeting;
   - should consider explaining the researcher experience and practice in previous similar research projects;
   - should be willing to provide copies of relevant project documentations, or summaries thereof, preferably including the project budget, in the local language;
   - must agree on a protocol of acknowledgments, citations, authorship as applicable, either citing local involved individuals, or respecting any request for anonymity;
   - must share findings at different stages with the informants and providers;
   - must not engage in bribery or making false promises.

3) **Involvement and Negotiation**

   - In negotiations, the researcher:
     - must take a reasonable effort to identify and negotiate with those who have the proper authority to negotiate – either civil or traditional authorities (sometimes this may include the entire community);
     - should consider, where there is no existing authority or capacity for carrying on negotiations, helping the community develop the institutional capacity to appraise and (if it chooses) enter into such agreements;
     - must disclose commercial interest or other possible interest of present or potential third parties;
     - should include a local institution as partner in research, where an appropriate one exists, and, if appropriate, local collaborators;
     - must promote both a MoU for collaboration and an Informed and Free, Prior and Informed Consent agreement with higher communal legitimate authority;
     - such agreements made, the researcher should consider depositing a copy of them with a relevant regional or sub regional body;
     - should ensure that the actual entity that is directing the research is a party to the agreements whether they are carrying out the work themselves or through contractors.

4) **Compensation and Other Terms of Access** (if and when applicable)

   - The researcher:
     - must make every effort to ensure that providing communities and counterpart institutions will share equitably in the benefits;
     - should make every effort to develop effective mechanisms for benefit-sharing if none currently exist, (recognizing that no proven universal methods exist, and that cultural and other circumstances will vary widely from case to case).

5) **Conservation Organizations, Governmental Agencies, Academic Institutions and Multilateral Agencies and individuals representing any of them:**

   - should encourage citation of intellectual contributions of local innovators, communities and groups;
   - should ensure sharing in the local language the insights gained from the local communities by the time of publication, or within reasonable time but not beyond one year of publication;
Protocols tools: formal written agreements

Protocols are reinforced by formal written agreements of various natures. An agreement has important benefits for all parties, as it provides clarity on all aspects of the project. Indigenous and traditional communities are most of the times hesitant about working with outside researchers, but communities can also be empowered through a well-negotiated agreement. For researchers, an agreement defines the expectations of the community and makes clear the role of the researcher(s) in the project. Any formal agreement must be supported by good consultation and the following of protocols, together with trust and good faith in working relationships. Respect, honesty, rapport, and careful listening to what the community has to say are important bases of any formal written agreement.

Formal written agreements are to be used later on the methodology proposed, concretely during the prospecting and inventorying phase and can be of the form of: (i) Regular Contract Agreements; (ii) MoUs; and (iii) Free, Prior and Informed Consent Forms.

Stakeholders involved: conservation and cultural government authorities, national conservation organizations, indigenous and traditional peoples representatives and the academia.

Timeframe suggested: 3 months

Benchmarks: Bibliographical review completed, stakeholders identified, questionnaires developed, interviews conducted, questionnaires completed and evaluated and protocols for future collaboration developed and ready for implementation.

Indigenous and traditional communities are most of the times hesitant about working with outside researchers, but communities can also be empowered through a well-negotiated agreement. For researchers, an agreement defines the expectations of the community and makes clear the role of the researcher(s) in the project.

Step 2.- Sacred Natural Sites Potential Distribution Analysis Phase

Methodology

Adapting and combining methodological approaches from García (2007), Ordoñez (1999) and Oviedo and Mañé (2000), the following exercise, based in a Geographic Information System (GIS) methodological approach, was conducted.

1. The preliminary step was that of establishing a working definition for the term “Sacred Natural Site”, an exercise which was done earlier in the document and was based upon a spatial scale fine tuning the characteristics of the various sacred entities contemplated. The accoladed upon definition to be used in a generic sense, is that the term Sacred Natural Site is “to include those sacred entities (spatially definable sacred landscapes, sacred natural physiographical features and sacred floral and faunal species) that are venerated and held in awe while acting as a linkage between nature and culture/spirituality for the communities involved. Thus, while the term may refer to sites of spiritual importance, it also encompasses places that are of symbolic significance -where space, place, memory and spiritual meaning come together.”

2. This said, the next step was to proceed with the application of a “coarse filter” including the key criteria that were used as working premises: that is, this research is to focus on Sacred Natural Sites of indigenous and traditional peoples with both rich cultural/spiritual and biodiversity traits. To reflect these criteria the following information was used:

- Coarse Filter

Areas with rich biodiversity: the information layers obtained from the National Commission for Knowledge and Use of Biodiversity (CONABIO), were those of Terrestrial and Hydrological Priority Regions. These “priority” regions were determined by CONABIO in an inclusive participatory process in which all the main conservation actors in the country intervened, hence, these regions are widely acknowledged as the most accurate and representative when depicting those areas with a high conservation value in Mexico.
Indigenous and Traditional Regions of Mexico: this information layer reflects those regions with an indigenous and traditional presence hence with a high cultural and linguistic diversity. These regions were primarily determined based upon their historical and cultural traits which are fundamental in creating a geographical nucleus, that of “traditional spaces”, places occupied historically by indigenous and traditional groups before and after the Spanish conquest, that have contained and harboured similar linguistic and cultural expressions, the same cosmovision, etc. Other criteria used in determining these regions were determined by similarities in their morphological features such as physical and natural features, altitude, and climate conditions.

In order to come up with the indigenous and traditional regions, three different information sources were used and combined resulting in the final map used in this research: the first layer of information was that provided by the National Commission for Indigenous Development (CDI by its initials in Spanish). The CDI map only displayed 25 of these indigenous and traditional regions which represent a 77% of the indigenous and traditional regions of Mexico (around 8 million people).

As a second information source, and to complete the remaining percentage, was the information presented by Toledo (2003) in the publication “Mexico’s Living Nature” which resulted in a more comprehensive and complete representation of these indigenous and traditional regions by identifying the gaps found in the CDI map.

The field research conducted by the author of this paper prompted the inclusion of a third layer of information, that of indigenous and traditional sites that though not having a continuous indigenous and traditional presence throughout the year do receive a periodic visit by these peoples as the periodic destinations of their pilgrimage cycles.

Results from the application of the “coarse filter”: The overlap of the terrestrial and hydrological priority areas plus the indigenous and traditional regions results in a map highlighting the areas for a first proposed potential distribution of Sacred Natural Sites (SNS). See Annex 6 for database information included and used for the production of (Map 1).

Sacred Natural Sites and legally established Protected Areas

The results obtained by running the coarse filter when compared against the distribution of legally established protected areas in the country, both at the federal and state level, to determine the overlap in between the SNS potential distribution sites and the protected areas network showing that most of the country’s protected areas are overlapped or surrounded by lands belonging to indigenous and traditional communities (Map 2).

The indigenous and traditional regions were primarily determined based upon their historical and cultural traits which are fundamental in creating a geographical nucleus, that of “traditional spaces”, places occupied historically by indigenous and traditional groups before and after the Spanish conquest.
Fine Filter

A second “fine filter” is run to further delimit the potential distribution of Sacred Natural Sites. Some of the criteria used for this step were those established in the working premises such as: (a) Sacred Natural Sites usually harbour rich biodiversity in an optimal conservation state; and (b) the spatial classification of sacred entities.

To determine the degree of conservation of the potential Sacred Natural Sites areas – ranging from a pristine/almost pristine to disturbed/highly disturbed - information on the percentage of primary vegetation (as an indicator of rich/pristine biodiversity) occurrence was used ranging from 1% to 91%. This layer was added using the following criteria: those sites with the higher percentages (above 34%) were considered most likely to contain Sacred Natural Sites in a pristine or almost pristine state. The potential Sacred Natural Sites falling under this threshold value were to harbour a disturbed or highly disturbed biodiversity: it is important to remember though that it is precisely within these highly degraded environments that relict Sacred Natural Sites, not necessarily very large in size, can be found having the potential to serve as genetic reservoirs and regeneration sites. Hence their value can not be underestimated and a further in depth prospecting analysis of the areas falling below the 34% mark must be conducted to discard or confirm the presence of these sites.

The 34% value – seemingly quite low – denoting a high/medium degree of conservation in the potential distribution sites was decided upon when facing the generalized devastation found within the potential Sacred Natural Sites distribution sites. It is highly probable that conducting this exercise in other countries may allow for employing higher percentages of primary vegetation to determine the conservation status of their Sacred Natural Sites. In the Mexican case though, applying values higher than 56% reduced the SNS potential distribution to a very limited number of sites as it can be appreciated next. (Map 3)

The next criteria to be applied is that of the spatial dimensions of sacred entities, in concrete, that of sacred natural physiographical features that may be the object of spiritual veneration for the local communities. Given the Mexican cultural context, and after a study of the physiographical features mostly venerated by Mesoamerican indigenous and traditional communities, it was decided to focus on and locate the most “popular” of these sacred features in a new attempt to further narrow down the SNS potential distribution sites. Hence, the features selected were those of: mountains, water bodies and caves. When using this methodology, it is recommended that researchers determine which dominant and characteristic physiographical features apply in their respective national cultural and natural contexts.

Mountains: these are to be higher than 2,500 meters since the literature review and field experience show that the higher mountains usually elicit a general reverence. This criteria could be further fine tuned by applying other factors such as identifying those mountains with distinct features (volcanoes, humanoid forms, having special shaped peaks, etc.)

Water bodies: the literature shows that from small creeks and ponds through ample lakes and oases are all together objects of reverence mostly in desert and dry environments to be found in the Northwestern and Northeastern regions of the country.

Caves: they play a key role in the spirituality of Mesoamerican indigenous and traditional groups; since the information detailing distribution of caves, caverns, cavities, subterranean features etc. could not be found at this point, the information to identify these sites was that of distribution of Karstic strata, an ideal indicative of the conformation of these geological features.

Sacred floral and faunal species: it would be highly recommendable to identify those floral and faunal sacred species and their spatial distribution to identify the Sacred Natural Sites associated to them. Unfortunately, this layer information was not available at this point in time. The specificity of these species distribution though, since most of them are endemic, will be a very useful criteria to use when the information is available.

At last, the information on indigenous and traditional pilgrimage routes was included since they usually unify distant geographically disperse and definable sacred landscapes and are dotted with many sacred natural physiographical features along their way. The author field experience confirms this hypothesis that is hence to be included as another layer of information in the following map.

When running the criteria described above a map was obtained that further delimits the potential distribution of Sacred Natural Sites throughout the Mexican geography. This is the map that is to be used as the basic guide to conduct the prospecting phase (Map 4)
The main steps of the methodology include:

- Prospecting Phase;
- Vision and Common Goals Assessment Phase;
- Socio-Cultural Assessment Phase;
- Inventorying Strategy Development Phase;
- Inventorying implementation Phase;
- Joint Monitoring & Evaluation System Establishment Phase.

1.- Prospecting Phase

In this step it is recommended to:

- Identify indigenous and traditional peoples, their communities, organizations and regional associations and their rightful representative bodies in the prospecting potential areas;
- Work hard on establishing credibility and transparency from the outset;
- Conduct an in situ evaluation of biodiversity richness and state of conservation of candidate sites;
- Conduct an in situ evaluation of spiritual connections and rituals of candidate sites;
- Take this opportunity to establish and support local working partnerships;
- Identify together with the community the one or several sacred entities in the area falling into one or several categories of the spatial scale definition;
- Proceed to the drafting and approval by the community of a Memorandum of Understanding (MoU).
Identify and develop an understanding with traditional management bodies such as the Councils of Elders and ways in which to include them in the inventorying process; Include at this point discussions and documentation of the Sacred Natural Site(s) resource use and tenure relationships, any conflicts and collaboration with neighbouring communities and any other relevant stakeholders; Identify current participation of indigenous and traditional communities in existing government institutions and mechanisms.

Tool:
The Registration Template is a key tool for this step. After an extensive bibliographic research and in accordance with the working premises set up in this research project the following template is proposed:

<table>
<thead>
<tr>
<th>Box 42 Sacred Natural Sites Proposed Registration Template</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Name of the Site (native and western denominations)</td>
</tr>
<tr>
<td>Name:</td>
</tr>
<tr>
<td>Origin and significance, spiritual and cultural context:</td>
</tr>
<tr>
<td>Indigenous and/or traditional groups involved:</td>
</tr>
<tr>
<td>2. Location and size</td>
</tr>
<tr>
<td>Geographic location: country,</td>
</tr>
<tr>
<td>province/state/department/latitude/longitude</td>
</tr>
<tr>
<td>Extension in Hectares</td>
</tr>
<tr>
<td>3. Protection status</td>
</tr>
<tr>
<td>If within the limits of a protected area, specify which:</td>
</tr>
<tr>
<td>Current authority (government, community, religious or spiritual group). Historical evolution of management authority Management instruments, if any (management plan, co-management model, community agreement, land use plan, other) Land tenure status Monitoring and Evaluation System (if any) Relationship to formally declared protected areas or other Sacred Natural Sites Relationship to international categories (World Heritage Sites, Biosphere Reserve, Cultural Landscape, etc.) 4. Environmental Significance Ecosystem Type/Uniqueness Priority Terrestrial Region - CONABIO Hydrological Terrestrial Region - CONABIO Type of vegetation (primary, secondary) Degree of conservation Watershed protection Other 5. Cultural Significance Importance for indigenous and traditional communities Societal role, meaning Secrecy Status 6. Current Situation Strengths, weaknesses, opportunities, threats Government and NGO involvement Financial support, if any 7. Information Sources References/Bibliography Videos: Graphic materials/visual aids 8. Lessons learned that might help other Sacred Natural Sites managers 9. Annexes (if pertinent, decrees, pertinent legislation, etc.)</td>
</tr>
</tbody>
</table>

4.- Inventorying Strategy Development Phase

The following steps are recommended:

Find a common ground with indigenous and traditional peoples rightful representatives; Jointly identify opportunities and options for the inventorying strategy; Ensure that this joint inventorying strategy may not interfer with other ongoing communal conservation and cultural projects; Develop locally appropriate strategic partnerships (i.e. Council of Elders); Promote the recording all of accords prior to the implementation of the inventorying using a Free, Priori and Informed Consent Form (FPIC).

Tool:

To ensure a broad acceptance and commitment to the inventorying a Free, Prior and Informed Consent Form must be accorded upon and signed by all parties involved.

The international law basis for the principle of Free, Prior and Informed Consent (FPIC) can be found in a legal commentary prepared for the Working Group on Indigenous Populations. A. FPIC is a way of formally documenting that the people taking part in a research project understand what the project is about and what they will be asked to do, and give permission for their knowledge to be used for the project. The main objective is to ensure that anyone who participates in your research project is informed about:

- how you propose to conduct the research,
- what you are asking them to do,
- what the research products will be,
- who will own them and rights to reproduce them,
- how you will protect personal or culturally restricted information,
- what will happen to any raw data

how the researcher will communicate the participants the results, and that they consent to all of these things before participating in the inventorying process.

Key elements of Free, Prior and Informed Consent (FPIC)

1.- What?

Free – should imply no coercion, intimidation or manipulation;
Prior – should imply consent has been sought sufficiently in advance of any authorization or commencement of activities and respect time requirements of indigenous and traditional consultation/consensus processes;
Informed – should imply that information is provided that covers (at least) the following aspects:
- a. The nature, size, pace, reversibility and scope of any proposed project or activity;
- b. The reason(s) or purpose of the project and/or activity;
- c. The duration of the above;
- d. The locality of areas that will be affected;
- e. A preliminary assesment of the likely economic, social, cultural and environmental impacts, including potential risks and fair and equitable benefit sharing in a context that respects the precautionary principle;
- f. Personnel likely to be involved in the execution of the proposed project (including indigenous and traditional peoples, research institutions, conservation and cultural actors and others)
- g. Procedures that the project may entail.
Consent - Consultation and participation are crucial components of a consent process. Consultation should be undertaken in good faith. The parties should establish a dialogue allowing them to find appropriate solutions in an atmosphere of mutual respect in good faith, and full and equitable participation. Consultation requires time and an effective system for communicating among interest holders. Indigenous and traditional peoples should be able to participate through their own freely chosen rightful representatives and traditional or other institutions. This process may include the option of withholding consent. Consent to any agreement should be interpreted as indigenous and traditional peoples have reasonably understood it.
2. When?
Free, prior and informed consent (FPIC) should be sought sufficiently in advance of commencement or authorization of activities (i.e. inventorying), taking into account Indigenous and traditional peoples’ own decision-making processes, in phases of assessment, planning, implementation, monitoring and evaluation and closure of a project.

3. Who?
Indigenous and traditional peoples should specify which representative rightful institutions are entitled to express their own decision-making processes, in phases of assessment, planning, implementation, monitoring and evaluation and closure of a project.

4. How?
Free, prior and informed consent should be sought sufficiently in advance of commencement or authorization of activities (i.e. inventorying), taking into account Indigenous and traditional peoples’ own decision-making processes, in phases of assessment, planning, implementation, monitoring and evaluation and closure of a project.

5. Procedures/Mechanisms
• Mechanisms and procedures should be established to verify FPIC as described above, including mechanisms of oversight and redress, such as the creation of national mechanisms.
• As a core principle of FPIC, all sides of a FPIC process must have equal opportunity to debate any proposed agreement/development/project. “Equal opportunity” should be understood to mean equal access to financial, human, and material resources in order for communities to fully and meaningfully debate in indigenous and traditional language(s) as appropriate, or through any other agreed means on any agreement or project that will have or may have an impact, whether positive or negative, on their development as distinct peoples or an impact on their rights to their territories and/or natural and cultural resources.
• FPIC could be strengthened by establishing procedures to challenge and to independently review these processes.
• Determination that the elements of FPIC have not been respected may lead to the revocation of consent given.


5.- Inventorying implementation Phase
Reaching this point, it is recommended to:

Implement the inventorying activity according to MOU and FPIC already accorded upon; Involve indigenous and traditional peoples communities and representative organizations in developing concrete activities of the inventorying process; Investigate, when needed, in developing local capacities during the implementation process; Hear in mind that indigenous and traditional communities may make last minute changes in the carefully plan devised throughout the previous phases: this could range from attempts to cancelling the project, altering the logistics of your surveying trips, asking and demanding the compliance of procedures that are not contemplated in neither the MOU nor the FPIC, etc., etc., in some occasions the communities are only testing your commitment to the project and are evaluating your stamina and perseverance...therefore, and most of times, if the other phases were rightfully conducted these “anecdotic situations” will also resolve on their own...when the time is right! The only advice if these circumstances were to occur is: patience, patience and...more patience!

6.- Joint Monitoring and Evaluation (M&E) System Phase
On a final stage of the process the following needs to be considered:
If necessary, build the local capacities to effectively implement the accorded upon M&E System; Use socio-cultural-natural benchmarks to monitor the degree of success of the bio-cultural conservation goals of the project; Extract lessons learned and best practices from the implementation of the inventorying process to share and extrapolate to other similar research contexts; Establish proper mechanisms to receive and act on feedback from indigenous and traditional communities, both on the functioning of the partnership and on inventorying follow up activities (i.e. compilation and dissemination of project results); Keep the M&E process transparent and accessible in local languages; Support follow up on agreements reached and captured in both the MOU and the FPIC; Learn, think about it and be ready to change and adapt those things that did not work!

Stakeholders: Indigenous and Traditional Rightful Representatives, researcher(s) and government authorities.

Timeframe suggested: 12 months.

Benchmarks: SNS information captured according to Registration Template, MoU and FPIC accorded upon and implemented, community rightful representatives participating in the process.

Step 4.- Compiling the information
Methodology:
The information registered on Sacred Natural Sites via the registration template is to be filtered and condensed into several fields that depict the sites most relevant cultural and natural features, the very same that are to be found in other international databases, and that are to become very useful in the Dissemination Phase.

The compiling of the resulting data will be conducted as follows:

Data collection on SNS was made via the registration template presented in the previous section; Data was collected individually for each Sacred Natural Site; Data gaps were also registered; Collected data was then captured on a simple data base format (Excel); The database fields are to capture and highlight the most relevant cultural and natural features of the registered Sacred Natural Sites according to international standards; Every Sheet will include the following information:

Name of the Site; Indigenous and traditional group(s) associated; Location (indigenous region); Coordinates if available; Size (in hectares); Type of sacred entity; In/out Terrestrial/Hydrological Priority Sites; Percentage of primary vegetation coverage; In/out legal protected area; Degree of threat: high, medium, low.

Stakeholders: Researcher and his/her academic and/or funding source institution, database experts, indigenous and traditional rightful representatives, government authorities.

Timeframe proposed: 2 months.

Benchmarks: Database in registered Sacred Natural Sites.

Step 5.- Results’ dissemination Phase
Methodology:
It is recommended that diverse methods of disseminating the project results be considered to ensure maximum and widespread use of the project findings. Given the delicate nature of the subject of this cultural/spiritual research the dissemination of its results must be guided by an overall pervading ethical responsibility on the part of the researcher and the institution he/she represents, including careful reviewing of copyright issues.

At this point, it also has to be clearly determined how indigenous and traditional communities are going to have access to the results of the research, an issue that has to be already captured and consented upon in the IFPC form. Indeed, communities want to be able to and use what is recorded in, and published about, their Sacred Natural Sites though most of the times these research works are highly technical and may be captured in foreign languages. Materials such as these are read by very...
few people and there are often not many copies of them available. This relatively inaccessible mate-
rial needs to be made more useful to communities. The way the information is captured need also take into account the learning and literacy needs of indigenous and traditional audiences.

Given the nature of the outputs of this project — a methodology and tools that need testing and fine tune and eventual validation in the field — the dissemination strategy should also consider funding prospects amongst the conservation national and international community to carry on this testing and validation activities.

The proper channels to disseminate this information are discussed below in the stakeholder and suggested tools section.

Tools:
- Posting project results on national and international websites (i.e. Alcoa Foundation, IUCN, Pronatura, etc.);
- Production of a Manual with the guidelines on how to implement step by step the methodology and tools developed;
- Writing up articles on major research findings in scientific, cultural journals;
- Writing up project highlights in accessible languages in general information magazines;
- Writing up funding proposals for consideration of potential donors;
- Engaging in ongoing processes and international fora promoted by IUCN and UNESCO (i.e. upcoming IUCN Congress in Barcelona, Spain).

Stakeholders: In Mexico: (1) spiritual and traditional indigenous authorities; (2) national environmental and cultural authorities; (3) state and local authorities; (4) private owners; and (5) indigenous, community-based and non-governmental organizations working on protected areas and biodiversity and indigenous cultural conservation.

In the international arena: (1) international indigenous and community networks (i.e. Rigoberta Menchu Foundation, the Indigenous Initiative for Peace); (2) IUCN and its World Commission on Protected Areas (WCPA) and its Task Force on Cultural and Spiritual Values of Protected Areas; (3) the United Nations Environment Programme (UNEP) and its World Conservation Monitoring Centre (WCMC); (4) UNESCO (Division of Ecological Sciences and its Programme Man and the Biosphere - MAB); (5) the Global Environment Facility (GEF); (6) the Interamerican Development Bank (IDB); the OAS (Organization of American States); and international foundations such as the US based The Christensen Fund.

Timeframe suggested: 6 months

Benchmarks: Dissemination tools and strategies implemented

CHAPTER 5: Initial testing of the Methodology and Tools

The following section illustrates the results obtained in a first run of the methodology and tools developed.

Results of the Evaluation Phase

In Annexes 1, 2, 3, 4, 5, and 6 can be found the answers to the questionnaires circulated among the key stakeholders identified for the open end interviewing process. The general answers show that the government representatives have a low if not null interest and/or appreciation for Sacred Natural Sites in general. Answers coming from the protected areas authorities mistaking Sacred Natural Sites for archaeological sites were not surprising. With notable exceptions this seems to be the rule. The academia and the national conservation NGO interviewees do show au contraire a genuine interest in the subject united to that shown by the indigenous and traditional representatives interviewed.

Results of the Sacred Natural Sites Potential Distribution Analysis Phase

The following maps are to prove the effectiveness and accuracy of both the spatial scale definition of sacred entities and the methodological approach developed in three Sacred Natural Sites case studies hence recommending two additional SNS potential distribution sites for a prospecting exercise.

“Every sacred center is consecrated by a manifestation of the sacred in some part of the natural order. A tree, a stone, a person, a book, a moral commandment – some aspect of the ordinary world becomes the vehicle for a decisive revelation of the sacred. When this occurs, the object, person, or event functions as a symbol of reality beyond itself. It points to and shares in an underlying structure of the world. In this way, each manifestation of the sacred serves as a paradigm of the nature of the universe. A tree, for example, when experienced as a manifestation of the sacred, discloses the world as a living totality…”

J. Ronald Engel in “Sacred Sands”, 1983

Given the delicate nature of the subject of this cultural/spiritual research the dissemination of its results must be guided by an overall pervading ethical responsibility on the part of the researcher and the institution he/she represents, including careful reviewing of copyright issues.
This site, being visited only during the fall by the Huichol pilgrims was to be included in the second filter criteria and proves the need to include this factor in order not to leave out important Sacred Natural Sites that were not recorded when applying a coarse filter.

Wirikuta is again an interesting model to apply the sacred entities spatial classification: indeed, Wirikuta being the easternmost end of the Huichol geographical cosmovision is part of a Spatially Diffused Sacred Landscape. Nevertheless, when considered aside from this geographical reference, Wirikuta is also a Spatially Definable Sacred Landscape (approximately 140,000 has) that is dotted by Sacred Natural Physiographical Features, such as water bodies (as identified in the map), sacred mountains (higher than the 2,500 meters as set in the criteria), etc. On an end note, to add that as in the case of the Seri territory, Wirikuta also falls within the category of Sacred Floral and Faunal Species entity, since it is the growing space for the “peyote” the revered cactus of the Huichols to be used in their communications with their gods.

The map also depicts a fragment of the pilgrimage route that unites this point with the other sacred geographical points of the Huichol cosmological world. As it was discussed earlier, it is interesting to note that the Huichol Spatially Disperse Sacred Landscape is united by this pilgrimage route, of which this map only shows a fraction, and that extends throughout more than 800 kms.

The caves of the Wind and Fertility (Tenek, Pame and Nahuatl indigenous peoples of the Huasteca region) in the state of San Luis Potosi

Map 7 shows another clear example that the methodology proposed works is that provided by the Caves of the Wind and Fertility. Indeed, it was earlier discussed that the percentages for primary vegetation cover mahy, below the 34%, discard potential SNS distribution sites that though generally devastated needed a further analysis as to explore the existence or not of the so-called relict Sacred Natural Sites. This map shows the result of conducting such analysis.

The literature shows that Mesoamerican indigenous and traditional peoples highly revere caves, canyons, and other physiographical features of the sort as sacred entities. In this case, the map shows that there is an obvious overlap between a fragment of the karstic Huastec area and the Huastec indigenous region. The Huastec karst landscape could be classified as a Spatially Disperse Sacred Landscape for the resident Tenek, Pame and Nahuatl indigenous peoples. The in depth analysis conducted in this area, with very low percentages of primary vegetation coverage, shows that physiographical features such as caves are held in reverence by the local indigenous peoples.

The author previous research concluded that there is a relict Sacred Natural Site in the area occupying a mere 8 hectares. This island of vegetation amongst widespread destruction is occupied by the Sacred Caves of the Wind and Fertility. The area constitutes a relict of the once predominant tropical forest. The local shamans use the site as the growing space of sacred medicinal plants that are only to be found in this small area. This Sacred Natural Site perfectly embodies the role of a genetic reservoir and regeneration site hence its key importance for conservation strategies at the regional and national levels.

The Tarahumara canyons of the Tarahumara Indigenous peoples in...
the state of Chihuahua

Given the successful results offered by the methodology in the previous case studies, other potential SNS distribution sites were identified in the general map and it was decided to focus on those areas showing the highest level of biodiversity in an almost pristine/pristine state: one of the resulting future case study areas is that of the Sierra Tarahumara in the state of Chihuahua (Map 8).

The Tarahumara region is a diverse landscape of highlands and deep canyons traversed by various rivers. The map shows the overlap of the Tarahumara indigenous region and that of the Yaqui-Mayo indigenous peoples. The primary vegetation percentage coverage is very high (56-91% as in the Seris case) on both regions.

In this case hence, it is highly recommended that the prospecting phase be conducted given the promissory perspectives depicted in the GIS analysis of the area.

Results of the Prospecting and Inventorying Phase

The only tool implemented of this Phase in all four potential sites is that of the registration template resulting from initial prospecting field trips. In the case of Tiburon Island, Wirikuta and the Caves of the Wind and Fertility the Registration Template was thoroughly completed given the ample and previous experience of the author on such sites. In the case of the Tarahumara region a very initial draft after a brief visit to the area is currently under development and in the case of the Yaqui-Mayo indigenous region the prospecting field trip is yet to be realized.

One sample of a completed registration template is shown below. The rest can be reviewed in Annexes 9, 10, 11 and 12.

Results of the Information Compiling Phase

The information captured via the review of these case studies was registered and then recorded according to the following simple Excel database format. The following template could be considered as the very first basic attempt of what could be a future database of Sacred Natural Sites in Mexico.

<table>
<thead>
<tr>
<th>Indigenous and Traditional Peoples</th>
<th>Location (indigenous region)</th>
<th>Coordinates</th>
<th>Size (ha)</th>
<th>Type of sacred entity</th>
<th>In/out Terrestrial and Hydrological Priority Sites</th>
<th>% of primary vegetation coverage</th>
<th>In/out protected area</th>
<th>Degree of threat (high, medium, low)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seri (Comcáac)</td>
<td>Seri region</td>
<td>28° 39' 10&quot; and 29° 22' 00&quot; latitude North and 112° 13' 20&quot; y 112° 37' 40&quot; longitude West</td>
<td>110,796</td>
<td>Spatially Definable Sacred Landscape</td>
<td>yes</td>
<td>90%</td>
<td>In</td>
<td>Low</td>
</tr>
<tr>
<td>Huichol (Wixarika)</td>
<td>Huichol region</td>
<td>NA</td>
<td>140,211</td>
<td>Spatially Definable Sacred Landscape</td>
<td>Yes</td>
<td>55%</td>
<td>In</td>
<td>High</td>
</tr>
<tr>
<td>Tepeh, Pame and Nahuahti</td>
<td>Huasteca Region</td>
<td>99° 00' 09&quot; 07 latitude North and 21° 47' 02 11 longitude West</td>
<td>8</td>
<td>Sacred Natural Physiographical Features</td>
<td>Yes</td>
<td>5%</td>
<td>In</td>
<td>High</td>
</tr>
<tr>
<td>Tarahumara (Rarámuri)</td>
<td>Tarahumara Region</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>Yes</td>
<td>90%</td>
<td>Out</td>
<td>High</td>
</tr>
</tbody>
</table>

Result of the Dissemination Phase

They remain yet to be seen.
CHAPTER 6: Conclusion

The conservation of Sacred Natural Sites has received an unprecedented attention and popularity, notably during the last decade: organizations such as UNESCO, WHC, UNEP-WCMC, IUCN, WWF, WCPA and other national actors have finally tackled the issue by including it in some major thematic discussions held at international fora, encounters that have also resulted on various publications on the subject. The WCPA has a laudable Task Force exploring the issues of Cultural and Spiritual Values in protected areas… the examples are there… the times seem to promote and encourage research projects that, as in this case, further explore and elaborate on the conceptual issues related to the validation of Sacred Natural Sites as effective bio-cultural conservation mechanisms. This momentum though would be of no long term sustainability and use unless a for various well respected, established and influential international conservation and cultural organization(s) embrace the subject of Sacred Natural Sites as a key thematic and structural component in their thematic agendas. The experience so far has shown that though Sacred Natural Sites have had this punctual presence in international conservation fora they have not reached the necessary “status” in the eyes of international organizations, to invest on them the basic human, structural and financial resources to finally establish the theme as a strategic issue in their conservation agendas. Unless, this topic is well anchored and solidly established as a consolidated institutional program housed in a renowned institution there exists the risk for Sacred Natural Sites to become a “passing trendy issue”.

Hence, behind the development of the methodology and tools proposed as the outcome of this research project, was always the intention to offer these products as effective instruments in the eyes of conservation actors to further demonstrate and consolidate the potential of Sacred Natural Sites as viable bio-cultural conservation mechanisms. It is only within the frame of this overall goal that the results of this paper are to have a meaningful contribution to the ongoing cause promoting the viability of Sacred Natural Sites. At this point in time, the methodology and tools developed in this project need to find an echo amongst national and international conservation authorities, organizations and funding multi-lateral agencies to test their validity and effectiveness.

If proven viable, the methodology and tools proposed could set the stepping stone from which Sacred Natural Sites inventorying exercises could be promoted to tackle the current information and documentation gap that does not allow for an appropriate planning, action and support for the conservation and sustainable management of Sacred Natural Sites, many of them bound to disappear before they are known or registered. Therefore, there is an evident need to register, document, recognize and support those existing Sacred Natural Sites currently lacking support and exposed to innumerable threats. These inventories will provide up to date information on Sacred Natural Sites such as the case on: their number, distribution, owner/manager communities’, natural, cultural and spiritual characteristics, state of conservation, management approaches, legal status, most pressing threats, etc.

As this document states early in the discussion, these Sacred Natural Sites registries must be built based on the voluntary disclosure and free, prior and informed consent of their traditional owners and managers. On a final note, a call to all my conservation colleagues to offer a fair chance to the concept of Sacred Natural Sites conservation since it is via this concept that we are finally paying attention to those indigenous and traditional conservation methods that, by respecting the inherent sacredness of nature, have proven successful and viable throughout the ages: Sacred Natural Sites are only a “living” proof of it.
Spatially Disperse Sacred Landscapes: having an extensive geographical influence zone; transcending geopolitical frontiers, usually unified and connected through sacred pilgrimages routes or symbolic sacred natural physiographical features such as rivers (i.e. Ganga).

Glossary

Natural: The western tradition often views nature as something separate from people, sometimes as an adversarial force to conquer and control, a view not shared by most indigenous and traditional peoples.

Indigenous Peoples: The term “indigenous” as used in this research paper, stands for “indigenous and tribal” according to the definition in Article 1 of the International Labor Organization’s Convention 169 on Indigenous and Tribal Peoples in Independent Countries (ILO 169), which states that the Convention applies to:

(a) Tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their customs or traditions or by special laws or regulations;

(b) Peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of the present State boundaries and who, irrespective of their legal status, retain some of their own social, economic, cultural and political institutions (Indigenous and Traditional Peoples of the World and Ecoregion Conservation).

Traditional Peoples: What may differentiate traditional communities from indigenous peoples is the latter’s claimed right to political self-determination, based on their self-identification as culturally (including linguistically) distinct peoples. There are also cases in which a distinction is made between traditional communities and indigenous peoples on the grounds of the latter’s aboriginality (in the sense of ILO 169). However, cultural self-identification is also a feature of traditional communities, and claims to political self-determination are increasingly made by many ethno-linguistic groups worldwide – although differences may exist in the way political self-determination is understood when aboriginality is a factor (Indigenous and Traditional Peoples of the World and Ecoregion Conservation).

For the purpose of this discussion, whenever this research project refers to indigenous peoples the concept is applicable by extension to traditional communities, that is, in the case of Mexico, “local communities embodying traditional lifestyles” (Indigenous and Traditional Peoples of the World and Ecoregion Conservation).

Inventory: the resulting product of making a catalog or detailed listing, often descriptive, in this case, of Sacred Natural Sites. In this case to be used as the building block leading to the creation of a database on Sacred Natural Sites.

Biodiversity: the Convention on Biological Diversity (CBD) defines biodiversity as “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.” In other words, it is the variety of life on earth at all levels, from genes to worldwide populations of the same species, from communities of species sharing the same small area of habitat to worldwide ecosystems.

Archaeological Site: is a place (or group of physical sites) in which evidence of past activity is preserved (either prehistoric or historic or contemporary) and which has been, or may be, investigated using the discipline of archaeology and represents a part of the archaeological record. This research project contemplates Sacred Natural Sites as places where rituals and ceremonies are currently performed by indigenous and traditional peoples.
Spatially Definable Sacred Landscapes: well-defined spiritual and cultural norms and practices; extension and geographical limits ranging from 300,000 to 10 has.

Sacred Natural Physiographical Features: include a wide variety of physiographical features that can be contained within a geographically disperse or definable sacred landscape, ranging from mountains, lakes, rivers and desert oasis through forest groves, islands, marshes, caves, stone arrangements, etc.

Sacred Floral and Faunal Species: are those species that are attributed a sacred, ritualistic, medicinal use by the community. Their presence confers a sacred status to either a landscape or a sacred natural physiographical feature.

Sacred Natural Site: all sacred entities (spatially definable sacred landscapes, sacred natural physiographical features and sacred floral and faunal species) that are venerated and held in awe while acting as a linkage between nature and culture/spirituality by a community. Thus, while the term may refer to sites of spiritual importance, it also encompasses places that are of symbolic significance - where space, place, memory and spiritual meaning come together

Agreement: an agreement is a legally binding bargain or contract between 2 or more individuals or organizations. With some exceptions, it can be written or oral or both. In these Protocols, though, agreement means a formal contract written or checked by a lawyer, and this term, and the term ‘model agreement’ is used instead of ‘contract’.

Indigenous Cultural and Intellectual Property (ICIP): As defined by Terri Janke (1998), ICIP consists of the intangible and tangible aspects of the whole body of cultural practices, resources and knowledge systems that have been developed, nurtured and refined (and continue to be developed, nurtured and refined) by Indigenous peoples and passed on by Indigenous peoples as part of expressing their cultural identity, including:

- Literary, performing and artistic works (including music, dance, songs, ceremonies, symbols and designs, narratives and poetry)
- Languages
- Scientific, agricultural, technical and ecological knowledge (including cultigens, medicines and sustainable use of flora and fauna)
- Spiritual knowledge
- All items of movable cultural property, including burial artifacts
- Indigenous ancestral remains
- Indigenous human genetic material (including DNA and tissues)
- Cultural environment resources (including Sacred Natural Sites).

Memorandum of Understanding (MoU): an instrument to formalize any initial accords in between the researcher and the communities hence clarifying the working relationship. It does not create binding or legal obligations on either party involved.

Free, Prior and Informed Consent principle (FPIC): FPIC is a way of formally documenting that the people taking part in a research project understand what the project is about and what they will be asked to do, and give permission for their knowledge to be used for the project. To their objective is to ensure that anyone who participates in your research project is informed about:

- how you propose to conduct the research
- what you are asking them to do,
what the research products will be,
- who will own them and rights to reproduce them,
- how you will protect personal or culturally restricted information,
what will happen to any raw data
how the researcher will communicate the participants the results, and that they consent to all of these things before participating in the inventorying process.

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Do you think it would be useful inventorying Sacred Natural Sites?

Yes, although superficially

If the answer is yes, what would be your definition of a Sacred Natural Site?

In a broad manner I would say that a Sacred Natural Site is a place or an environmental element (river, mountain, rock) that has not been modified substantially by man, maintaining most of its natural characteristics, and which for a particular group of ethnic people or indigenous communities has a spiritual or religious value attached to it.

Are you familiar with the concept of bio-cultural conservation?

Not as such, although it’s an interesting way of highlighting two important components of biodiversity and the interaction between them.

If the answer is yes, would you favor the implementation of this conservation model in Mexico?

Certainly. Specially since Mexico has such a rich cultural heritage and is home to many ethnic groups. It is interesting to note that many of the rich forest ecosystems in Mexico are part of indigenous and community lands. Many of these indigenous peoples and communities have build an important traditional knowledge on the use and management of the natural resources of the different ecosystems they are linked to, becoming an important part of their culture.

On the other hand, the use given to the land by a particular group of people should be recognized and respected. This recognition should be able to defend this land use against third interested parties or even the government, and give the indigenous groups legal security over their land. It is also a matter of empowerment; indigenous and traditional communities are under many pressures such as poverty and cultural loss, the recognition of the importance of their Sacred Natural Sites should empower their culture.

Sacred Natural Sites and Conservation Projects

Have you encountered Sacred Natural Sites in your conservation work?

Not yet.

If the answer is yes, how have you incorporated this component into your project?

Has your organization a working protocol for working with indigenous and traditional peoples?

It’s being developed.

ANNEX 1

Questionnaire for Conservation NGOs

Basic Information

1. Name of the organization: Pronatura México, A.C.

2. Name and position of person answering the questionnaire:

E. Alejandra Salazar Dreja

Environmental Policy Director

3. Date of the interview:

August 4th, 2007

Location:

México City, México

Contact Information:

Tel.: +52 (55) 56 35 50 54 (116)
Fax: +52 (55) 56 35 50 54 (113)
Address: Aspérgulas #22
Col. San Clemente
C.P. 0140
México, D.F.

Sacred Natural Sites

Are you familiar with the concept of Sacred Natural Sites?

Yes, although superficially

If the answer is yes, what would be your definition of a Sacred Natural Site?

In a broad manner I would say that a Sacred Natural Site is a place or an environmental element (river, mountain, rock) that has not been modified substantially by man, maintaining most of its natural characteristics, and which for a particular group of ethnic people or indigenous communities has a spiritual or religious value attached to it.

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Sacred Natural Sites and Conservation Projects

Have you encountered Sacred Natural Sites in your conservation work?

Not yet.

If the answer is yes, how have you incorporated this component into your project?

Has your organization a working protocol for working with indigenous and traditional peoples?

It’s being developed.

Research Project on Sacred Natural Sites

Do you think it would be useful inventorying Sacred Natural Sites?

Yes, I think it would be. As I understand, there aren’t many inventory protocols for Sacred Natural Sites, and in Mexico, it would be interesting project precisely because of the rich cultural diversity of the country and the high occupation of indigenous groups in natural areas.
If the answer is yes, would the research product be of any practical benefit or use to your organization?

Yes, of course. The organization has a strong private lands conservation program, that help communities manage in a sustainable way their land’s natural resources, and preserve biologically important land tracts. Natural Sacred Sites are already preserved, in a way, which means that there is a larger certainty that they will be protected, which helps to identify potential biological corridors or buffer sites.

Could it be detrimental in any way? If the answer is yes, why?

Not really. What could happen is that no conservation and ecological restoration activities are allowed in a certain sacred natural site.

Building Capacity
Do you consider yourself and/or your staff trained to successfully tackle the conservation of Sacred Natural Sites?

Maybe not me, I would need some training on how to approach indigenous communities, but I think some of the staff do have the necessary knowledge and training to do it.

If the answer is no, would be willing to undertake capacity building courses?

I would.

Documentation
Is there any written information available on your organization on bio-cultural issues and/or Sacred Natural Sites? If yes, please elaborate on format, lessons learned, etc.

Yes there is, but not much. As far as I know, the Pronatura Magazine features periodically some information on sacred sites.

Are the right questions being asked? What else would you consider vis a vis Sacred Natural Sites conservation?

What are the challenges of Sacred Sites Conservation and the right management for they differ substantially from other natural sites in the sense that they have a symbolism attached to them that forcefully requires a different management approach.

Thank you for your collaboration!

ANNEX 2

Questionnaire for Protected Area Agency Authorities

Basic Information

Name of the agency: CONANP
Name and position of person answering the questionnaire: Director de Procuración de Fondos
Date of the interview: 26 August 2007
Location: México City
Contact Information: No answer

Sacred Natural Sites
Are you familiar with the concept of Sacred Natural Sites? Yes
If the answer is yes, what would be your definition of a Sacred Natural Site?

Places which still are venerated my Mexican people up to day
Are you familiar with the concept of bio-cultural conservation? yes
If the answer is yes, would you favor the implementation of this conservation model in Mexico?

Absolutely

Sacred Natural Sites and Protected Areas

Are you aware of the existence of Sacred Natural Sites within the boundaries of legally protected areas in Mexico? (at the federal, state, municipal, private levels?) No answer
If the answer is yes, does the management plan of any of the reserves contemplate the management of these sites? No answer

Protected Areas Legislation

Does the current protected areas policy contemplate the cultural/spiritual aspects of such areas? No
Would you be in favor of promoting Sacred Natural Sites as management category in its own right? Absolutely

Research Project on Sacred Natural Sites

Do you think it would be useful inventorying Sacred Natural Sites? Yes
INAH certainly has it already
If the answer is yes, will the research product or process be of any practical benefit or use to your department?

Yes
Could it be detrimental in any way? If the answer is yes, Why?

No
Has your agency conducted a research exercise of this nature?

Ignore it

Building Capacity

Do you consider yourself and/or your staff trained to cope with the management of Sacred Natural Sites? No
If the answer is no, would you be willing to undertake capacity development courses?

Not interested

Documentation

Is there any written information available on your organization work on bio-cultural issues and/or Sacred Natural Sites? If yes, please elaborate on format, lessons learned, etc. No answer

Are the right questions being asked? What else would you consider vis a vis Sacred Natural Sites Conservation?

Please elaborate

Thank you for your collaboration!

ANNEX 3

Questionnaire for Conservation NGOs

Basic Information

1. Name of the organization: WWF Programa Mexico
Name and position of person answering the questionnaire: Raquel Gómez Almaraz, Program Officer, Integrated River Basin Management
Date of the interview: 7.7.2007
Location: Durango
Contact Information: rgomez@wwfmex.org, ragalma@gmail.com

Sacred Natural Sites

Are you familiar with the concept of Sacred Natural Sites? Yes, more or less
If the answer is yes, what would be your definition of a Sacred Natural Site? A natural site or area consid-
Sacred Natural Sites and Conservation Projects

Here you encountered Sacred Natural Sites in your conservation work? Yes, but I haven't visited them yet.

Neither I know what's happening there.

If the answer is yes, how have you incorporated this component into your project? I don't have the answer yet.

Has your organization a working protocol for working with indigenous and traditional peoples? Yes

Research Project on Sacred Natural Sites

Do you think it would be useful inventoring Sacred Natural Sites? It may be useful, but it may also be dangerous for its conservation.

If the answer is yes, would the research product be of any practical benefit or use to your organization? For my concrete work, yes.

Could it be detrimental in any way? If the answer is yes, why? As I said before, making areas "public" may attract some undesirable people, projects etc, etc.

Building Capacity

Do you consider yourself and/or your staff trained to successfully tackle the conservation of Sacred Natural Sites? Not enough

If the answer is no, would be willing to undertake capacity building courses? Sure, whit pleasure!

Documentation

Is there any written information available on your organization on bio-cultural issues and/or Sacred Natural Sites? If yes, please elaborate on format, lessons learned, etc. Sorry, but I'm not the right person to answer this question. I'm sure there must be some, but I don't know them.

Are the right questions being asked? What else would you consider vis a vis Sacred Natural Sites conservation?

Thank you for your collaboration!

ANNEX 5

Questionnaire for Indigenous and Traditional Peoples Organizations

Basic Information

Name of the organization: Cham Coyai
Indigenous and Traditional Group it represents: Seri indigenous peoples
Date of constitution: Year 2000
Name and position of person answering the questionnaire: Diana Lasque, Adviser
Date of interview: 24 July, 2007
Contact Information: Punta Chueca, Seri Territory, Sonora, México

Your organization work

In what kind of work is your organization involved? Please specify: Cham Coyai is currently involved in several projects: (i) supporting the development of a traditional school promoted by the Seri Council of Elders; (ii) the systematization and organization of the Seri Traditional Ecological Knowledge; and (iii) the development of sustainable development projects based upon the Seri cultural heritage.

Have your organization conducted any work on Sacred Natural Sites? If the answer is yes, please specify when, how, and results obtained.

We call them “Sites of Cultural Value” and yes, we have worked on this subject matter, always under the leadership and guidance of the Council of Elders. We are trying to teach the young generations the value of these sites and the creation myths and stories associated with them and how these sites were managed under a traditional knowledge management system based on cultural values. As a result of this work, we produced a map depicting the sites of cultural value in Seri territory although the information related to those sites considered “secret” was never included in the final map. The whole totality of the Seri territory is considered sacred for the Seris but there are special sites in which special events did occur – such as the transfer of special teachings- and these were the specific sites that were kept secret as requested by the Council of Elders.

Sacred Natural Sites and the country’s cultural patrimony

In your opinion, are Sacred Natural Sites currently considered as part of the country’s cultural patrimony? Yes of course.

In your opinion, are their linkages to cultural heritage, linguistic diversity, etc. currently under consideration? Yes but alone some how many are integrate all these points

Research Project on Sacred Natural Sites

Will it be useful inventoring Sacred Natural Sites? Of course, because in this way we can know them himself and can be given them the attention necessary

Will the research product or process be of any practical benefit for the academic community? Will be in benefit so much of the community, the academy, as the general society.

Are you aware of past or/and ongoing research projects in this subject matter? No

Documentation

Is there any written information available on your organization work on bio-cultures issues and/or Sacred Natural Sites? If yes, please elaborate on format, lessons learned, etc. Not in this moment

Are the right questions being asked? What else would you consider vis a vis Sacred Natural Sites Conservation?

Please elaborate:

The questions are correct; the original idea to integrate the concept bio-cultural conservation beyond over there of a simple inventory

Thank you for your collaboration!

ANNEX 4

Questionnaire for the Academic Institutions

Basic Information

1 Name and position of person answering the questionnaire: Antonio Ordóñez
2 Name of Research Institution: Professor/ Research UNAM and Pronatura
3 Date of interview: September 1st, 2007
4 Contact Information: Mercedes Obregón

Sacred Natural Sites and the country’s natural patrimony

Are you familiar with the concept of bio-cultural conservation? Yes, more or less

If the answer is yes, would you favor the implementation of this conservation model in Mexico? For me, any reason to look for and implement conservation is good. However, the way conservation is targeted and approached may imply difficulties that I’m not familiar with, for the case of bio-cultural cons.
One of the main constraints identified was that the older generations and the most traditional and conserva-
tive community members did not want to reveal their sites of cultural value...it was the undeniable threat that
the knowledge associated to these sites was about to be lost that forced these reluctant members to work
on the project. The thing is that, as in most indigenous and traditional societies, the Seri traditional knowl-
edge is passed orally from one generation to the next and the current changes affecting the life style of the
community have threatened this oral transmission mechanism. Those in favor of disclosing the sites were try-
ing to secure a protection status for the sites which they consider are under many pressing development
threats. To solve this issue, before the project implementation, it was accorded with the community that all
the information generated, and especially that considered “secret”, was to remain within the confines of the
community.

The positive side to this was the fact that thanks to this project, there exists now footage capturing the Seri
elders explaining to and sharing with the Seri younger generations the value and the histories related to the
Seri territory...some of the stories have been recorded in the native Comcáac language. The whole of these
testimonies has been captured in more than five voluminous research papers in which the cultural and sacred
value of each site depicted in the map is explained by an elder.

Research Project on Sacred Natural Sites

Will it be useful inventorying Sacred Natural Sites? Yes, definitely, as long as a participative and inclu-
sive research strategy is devised for the implementation of the project. There is also the need to put into
legal form whatever accords are to be reached with the community rightful representatives. On a last note, it
is also very important to specify the copyright issues for the resulting research materials: in our research
projects, the results generated remained in the legal hands of the community and no institution participation
or funding the project has had the right to reproduce it without the written permission of the community.

Will the research product or process be of any practical benefit or use to the community? Yes indeed, since the current “modern” ways menacing the traditional cohesiveness of indigenous and traditional cultures
is menacing the oral passing of the traditional knowledge from one generation to the next. Most of the
knowledge that is currently being lost has to do with the management of natural resources...this is why it was
specially rewarding to work in the systematization of the Seri traditional knowledge and sites of cultural
value since the indigenous and traditional perception of the sacred varies radically from the western ways of
perceiving the sacred and nature in general. And this different perception of the sacred implies different ways
of managing natural resources.

Could it be harmful in any way? From the community’s perspective, is there potential for the project or
any aspect of it to be harmful in any way to individuals or the community? Is potential for harm acknowledged
in the research proposal? How is this possibility to be addressed?

We believe that is very important not to disclose the exact location of sacred sites rather it would be
advisable to disclose the existence of those sacred spaces that contain sacred or cultural sites
within their limits.

What would be ideal form of involvement of the community in this research project?

As stated earlier, the best approach towards this conservation/cultural projects is that of a participative model
that identifies the key stakeholders from the community that are to be involved in the project, both the
younger and older generations; specially the latter have been identified as key participants of cultural and
spiritual projects. It is also advisable when it comes to the stakeholders definition, to identify those individ-
uals from research or public institutions that are close to the community. It is also of key relevance to identi-
fy those young members of the community that are ideal candidates to undergo capacity building programs for
the implementation on the accorded upon research project methodology. It is also important to produce a
document capturing the pros and cons of the project implementation and to consider that most of times,
sacred sites, do extend beyond the legal limits of indigenous and traditional territories: there are even cases
in which the communities do not have the legal property of their territories?

Who is to be the community’s rightful representative body?

Generally this is to be the traditional government structures such as is the case of the Council of Elders. It is
also highly advised that those individuals with close ties with the communities offer advice on how to best
approach the community: although there are general steps to be taken when initiating research work with an
indigenous and traditional community, each one is different in customs and uses and tailored shaped strate-
gies have and need to be devised when approaching a community. For instance, the Seri case, is rather sim-
ple when it comes to this point since the territory is on the legal hands of the Seris, is well defined, there are
no “mestizo” members, there are no outside invasions, the degree of conservation of the territory natural
resources is optimal, etc. it is in this sense that identifying the Seri rightful representatives bodies was a rel-
atively simple task when compared to other rather complex Mexican indigenous and traditional peoples.

Would you consider capacitating members of your community in legal/management issues concerning
Sacred Natural Sites conservation?

Yes, especially the younger generations....

Documentation

Is there any written information available on your organization work on bio-cultures issues and/or Sacred
Natural Sites? If yes, please elaborate on format, lessons learned, etc.

Yes, there are a couple of publications that can be consulted by the general public.

Are the right questions being asked? What else would you consider vis a vis Sacred Natural Sites
Conservation?

Please elaborate

Yes, I would like to add that generally a shortcoming of this type of work is the fact that the political and eco-
nomic problems and challenges of the community are left outside the cultural equation when they should be
included as a key component securing the eventual successful implementation of these projects. Topics such as
that of sustainable development needs to be included and considered and options such as ecotourism
should be included as an option for reaching a sustainable development in the community.

Conservationists in general, now not interested at all in this bio cultural approach towards conservation,
should open their perspectives and ways of working to include the sacredness of nature, present in indige-
nous and traditional cosmovisions, as a key component in their conservation strategies given the fact that
indigenous territories are generally and in most cases in a better and most pristine conservation status than
their surrounding environments.

Thank you for your collaboration!

ANNEX 6

Database on Excel Format to be attached in a different document

ANNEX 7

Sample Memorandum of Understanding (MoU) between an Indigenous and Traditional Community
(ITC) and a Researcher or Institution

THIS Memorandum of Understanding (MOU) is made on and effective from the ______ day of ______, ______.

Memorandum of Understanding between

[ITC rightful representative bodies]

and
BACKGROUND

The [ITC rightful representative bodies] support and approve their participation in the [full name of research project] in principle.

The Parties have entered into a collaborative research project to work towards the following goals and objectives:

[List goals and objectives.]

In support of these goals and objectives, the Parties will seek to combine traditional and innovative forms of research.

The [ITC rightful representative bodies] wishes to ensure that its people’s customary stories and related teachings do not become the property of the [research institution] or its supported or affiliated researchers.

The Parties wish to carry out their goals and objectives in the context of the following principles:

- respect for all partners involved;
- transparency in all dealings with respect to the research project;
- observation of cultural customs and practices, with respect to - Ecological Traditional Knowledge. The [research institution] and its supported or affiliated researchers should not personally acquire any rights from publishing materials containing [language or First Nation] stories, myths, legends, folklore, oral traditions or other traditional knowledge; and
- collaborative decision-making.

THEREFORE, THE PARTIES HAVE THE FOLLOWING UNDERSTANDING:

Process

A mutually agreed-on process will be followed to prioritize the specific projects done to reach the goals and objectives outlined above. For any project, this process shall minimally include:

- development of an academic- and community-informed project research plan (including budget), with explicit reference being made in the plan as to how the project will contribute to the Parties’ broader goals and objectives;
- review and approval of the research plan by the [ITC rightful representative bodies];

Free, Prior and Informed Consent (FPIC)

The Free, Prior and Informed Consent of individual community members must be secured in writing before they participate in research, recordings or inventories. The written permission of the individual community members to release the information to the [ITC rightful representative bodies] will be sought by the researchers, including any restrictions the individual community members might wish to attach to the use of this information. Written informed consent is evidenced by the signature of the individual community member on the Participant Consent Form.

Disposition of Research Materials

Originals of all audio/visual recordings (in digital and/or analog formats) and copies of all notes, transcripts, photographs, and other records of the research will be kept by the [ITC rightful representative bodies]. Copies of all audio/visual recordings and originals of notes, inventories, transcripts, photographs and other records will be kept by the researchers.

The Parties will ensure that a final, permanent repository for the research materials, to be created by the researchers, will be utilized. Additionally, the researchers will make as a condition of the deposition that the repository will provide access to [ITC rightful representative bodies] members. Further, the repository will adhere to any confidentiality or use restrictions made by the individual community members under section two of this Memorandum.

Protection of Customary Intangible Property

The Parties agree that the researchers will respect customary [ITC] property laws. To facilitate this, the Parties agree that the researchers will endeavour to, where reasonably possible, not record known customary intangible properties, respecting private and confidential sacred matters (“Customary Intangible Property”).

The Parties recognize that the [ITC] elders may provide guidance and advice in identifying and delimiting Customary Intangible Property.

The [ITC rightful representative bodies] may wish to provide further definitions of, or guidelines concerning, Customary Intangible Property here.

Publication

Subject to the terms of the arrangement set out in this Memorandum of Understanding, the [ITC rightful representative bodies] hereby grants the researchers a licence to publish for scholarly and educational purposes the information collected during the course of the research project.

The researchers will ensure that two copies of all publications, conference papers and other educational and scholarly materials produced in the course of the project be deposited with the [First Nation, Tribal Council, etc.].

Ownership of Customary Intangible Property

In publications resulting from this collaborative arrangement, no claim of copyright or exclusive rights by the researchers or their publishers will be made on legends, myths, folklore or Customary Intangible Property that are the acknowledged intellectual property of the [ITC] community or community members.

Any publication done for scholarly and/or educational purposes will include the following provision: “The text of the stories, myths, legends, and folklore belong to the [ITC] people and therefore no claim of copyright or exclusive rights is made upon them.”

Confidentiality and Royalties

The Parties agree that where Customary Intangible Property, referred to above in sections five and six of this Memorandum of Understanding, is shared with the researchers, or mistakenly recorded by them, they will use all reasonable efforts to prevent the publication of, or public access to, this information.

The Parties will not acquire any royalties or monies tantamount to royalties for publishing materials that contain (First Nation) stories, myths, legends, folklore, or Customary Intangible Property. This does not constrain the researchers from publishing linguistic analysis.

Dispute Resolution

In case of a dispute arising from the implementation of this Memorandum of Understanding, the Parties shall exhaust alternative dispute resolution models such as negotiation and mediation before employing other forms of dispute resolution such as arbitration or adjudication. Parties shall act in good faith to resolve the dispute.

In the case of a dispute arising regarding the proper management of Customary Intangible Property, the elders shall specify the means for settling the dispute, such as mediation.

Insurance

The parties acknowledge that they have adequate liability insurance applicable to their officers, employees, and agents while acting within the scope of their employment by the parties. Therefore, each party hereby assumes any risks of personal injury and property damage attributable to the negligent acts or omissions of the party and its officers, employees, and agents.
Wirikuta, which is the native denomination. This name comes from the Huichol voice "wirima", which
means to anoint or to touch, for the Huichols consider that different deities and ancestors that dwell in this
sacred land of the peyote, where the "jicareros" novices eat the sacred cacti to enable communication with
the deities and ancestors. The peyote, the sacred plant that gives rise to their communion with the divine, is a
small cactus, Lophophora williamsii, that contains different types of alkaloids, like mescaline and anhalamine.
Its ingestion produces delirious and hallucinating effects like the ones caused by hallucinating mushrooms and
LSD. The Mexican legislation allows the Huichols to ingest and carry it with them.

**Origin and significance, spiritual and cultural context:** Wirikuta is the eastern end of an annual pilgrimage
conducted by the Huichol "jicareros". It was in Wirikuta that the sun was born at last and it is in Wirikuta,
the sacred land of the peyote, where the "jicareros" novices eat the sacred cacti to enable communication with
the deities and ancestors. The peyote, the sacred plant that gives rise to their communion with the divine, is a
small cactus, Lophophora williamsii, that contains different types of alkaloids, like mescaline and anhalamine.
Its ingestion produces delirious and hallucinating effects like the ones caused by hallucinating mushrooms and
LSD. The Mexican legislation allows the Huichols to ingest and carry it with them.

**Indigenous and/or traditional groups involved:** The Huichols, or Wixarika, as they call themselves. In 1895,
more than a century ago, Carl Lumholtz, a Norwegian anthropologist, visited Mexico’s Western Sierra Madre
mountain range territories. Among these terrains he found the land of the Huichols, one of the indigenous
groups that has better preserved its identity and traditions in Mesoamerica. One of the main anthropological
theories concerning the Huichols traces their origin to the Un-Aztec-Sonoran ethno-linguistic group that
got established in the Western Sierra Madre. It was in this natural bastion that they resisted several attempts of
invasion from the early Spaniards through the early 1900’s of the Mexican Revolution and the “cristeros”
religious wars.

The Huichols’ main settlements are located in the state of Jalisco though there are also important Huichol set-
tlements in the states of Nayarit and Durango. The Huichols of Jalisco are organized in three major com-
mon bodies and one so-called “Annex” totaling a population of 13,671. The extension of their territory in
Jalisco is of 3,921.07 km². The Huichols live in scattered small communities of no more than a hundred indi-
viduals usually close to a source of water and located in the deep canyons and valleys of the Sierra. The main
economic activity is seasonal agriculture that barely reaches the levels of self-sufficiency due to poor soils. They mainly produce beans, squash and chile pepper which are basic elements in their diet. The most important cultivation though is that of corn which is also considered a sacred product of the “mother earth.” The most important secular representative positions are those of traditional governor (Tatitana), captain, and chief of the various municipal and regional offices. The choosing of the communal authorities falls on the Huichol elders and Mata kames who decide who is to be assigned to each position. The duty of these representative authorities is to keep the community internal “harmony” by resolving daily problems. They also make sure that the community respects and celebrates traditional ceremonies in due time. In recent years though, the traditional governor figure holds the community representativity in the eyes of the Mexican government and the non-Huichol world in general.

The Huichol communities in Jalisco give equal importance to their ayrian communities, which are represented by the “Communal Goods Authority” and are in charge of implementing a national use and administration of the community natural and terrestrial resources. Both representative bodies report to and submit to consideration of the Communal Assembly all decisions that are of relevance to the whole of the community.

The main religious authority is embodied by the marakames, elders who concentrate the community’s wisdom and have undergone a rigorous mental and physical training to reach a special state of grace that allows them to perform spiritual functions with their gods and ancestors. The Huichol ancestors and deities dwell in the so-called jicaras, which are to be kept for inside of the Tukupa or ceremonial center. In the state of Jalisco there are 23 tukupa, which are being taken care of by the so-called jicareros who will be guarding those jicaras assigned to each one of them. It is precisely on the tukupa that the marakames decide when the pilgrimages to their sacred sites must take place.

2. Location and size

Geographic location: country, province/state/department/latitude/longitude: Wirikuta is located in the state of San Luis Potosí, expanding through the municipalities of Catore, Matutlauda, Villa de Paz, and Villa Guadalupe. Wirikuta is located in the state of San Luis Potosi. The Huichols don’t have permanent settlements in this state being the final destination of their pilgrimage. The communities living adjacent and within the reserve are conflated by Mexican mestizos. This area known locally as the Potosino plateau, is one of the most and its environment and culture and the desert and in search of the Divine One, the peyote. And neither the conquest, nor the persecutions of the Holy Sierra’s solitude. And the third, that of the catholic mestizos that perform an annual pilgrimage from all over the state of San Luis Potosi, expanding through the municipalities of Catorce, Matehuala, Villa de Paz and Villa Guadalupe. Wirikuta is located in the state of San Luis Potosí. The Huichols don’t have permanent settlements in this state being the final destination of their pilgrimage. The communities living adjacent and within the reserve are conflated by Mexican mestizos. This area known locally as the Potosino plateau, is one of the most compromised areas of the country due to poverty and massive emigration to other countries and abroad, in search of better opportunities. The most important town located in the Wirikuta area is Real de Catore which is an old mining village in which three towns are put together. The first, the most ancient and secret one, belongs to the Huichols. For centuries now, they sanctified the land where they devoted their pilgrimage in search of the Divine One, the peyote. And neither the conquest, nor the persecutions of the Holy Sierra, nor the crowding of other peoples on the mission, nor the changes in time were able to alter, in essence, the spiritual meaning of their journey. The second one, is that of the miner’s descendants, who were able to establish a XVIII century town within the Sierra’s solitude. And the third, that of the catholic mestizos that perform an annual pilgrimage from all over the country to the very much revered sanctuary of St. Francis in Real.

Extension in Hectares: 450,821.35 ha

Spatial classification of sacred entity: Spatially Definable Sacred Landscape

3. Protection structure

If within the limits of a protected area, specify which. It was in 1994 that Wirikuta was first decreed as a “Site of Cultural and Historic Heritage and Area under Ecological Conservation of the ethnic group Huichol and of their sacred sites as well as their historical-cultural context and its importance. Its lakes, springs, rivers and streams are home to a spectacular array of freshwater species. In enclosed basins and ephemeral rivers, cut off from the sea and isolated from other river systems, turtles, tortoises, and other species that are found nowhere else in the world have evolved. A number of key adjacent areas tough, home of diverse and some endangered species. It stretches nearly 250,000 sq. miles (630,000 sq. km) from the Mexican plateau into southeast Arabia, across New Mexico and west Texas and is framed by the Rocky Mountains and the Sierra Madre systems.

It’s diverse habitats provide the kaleidoscope of textures and colors that shape its unique landscapes. Mule deer, pronghorn and kit fox roam the vast plains. It was here that Watákame, a farmer, touched first ground after the universal flood; and Wirikuta (in the Chihuahuan Desert of the state of San Luis Potosi) the eastern end of the Huichol “geography” and final destination of the Huichol pilgrims is seasonal, their participation in the management of the reserve is to occur though the very same management body of the reserve is yet to be defined. Local communities have request for the permanent presence of Huichol representatives in the reserve’s management team, a request that is highly unusual and points out to a relationship of mutual respect between the local inhabitants of the reserve and the Huichol pilgrims. Under the contemplated inclusive/participative management scheme, the cultural assets of the reserve are to be managed then by their very same users, that is, the Huichol.

Land tenure status: Ejidos and private lands

Monitoring and Evaluation System (if any): NA

Relationship to formally declared protected areas or other Sacred Natural Sites: Relationship to international categories (World Heritage Sites, Biosphere Reserve, Cultural Landscape, etc.):

4. Environmental Significance

Ecosystem Type/Uniqueness: Wirikuta is located in the Chihuahuan Desert of the state of San Luis Potosí in Mexico, a portion of the Altiplano-Desert ecorregion. The Chihuahuan is one of the most biologically rich terrestrial ecoregions in the world, home to more than 2000 species and the majority of the world’s desert butterflies. It is a global biodiversity hotspot and has undergone a rigorous mental and physical training to reach a special state of grace that allows them to perform spiritual functions with their gods and ancestors. The Huichol ancestors and deities dwell in the so-called jicaras, which are to be kept for inside of the Tukupa or ceremonial center. In the state of Jalisco there are 23 tukupa, which are being taken care of by the so-called jicareros who will be guarding those jicaras assigned to each one of them. It is precisely on the tukupa that the marakames decide when the pilgrimages to their sacred sites must take place.

5. Cultural Significance

Importance for indigenous and traditional communities: The Huichol main sacred sites outside their communal lands conform the four cardinal points of their territory. These five sites are: Huaromán (Isla del Rey – King Island: in the coastal state of Nayarit) representing the western end of their world and the dwelling of the sea goddess Nagakué, the surface of the fived colored corn; Huaun Manaku (Cerro Gordo – Fuerte Hill: in the state of Durango) representing the northern most point where the canoa of the goddess Nakakué, mother of all gods, finally rested and where the wind and the royal eagle, her messengers, were born; Xapawiyeme (Isla de los Alcyones – Scorpion Island; in the Lake of Chapala in the state of Jalisco) representing the south where Watikame, a farmer, touched first ground after the universal flood; and Wirikuta (in the Chihuahuan Desert of the state of San Luis Potosí) the eastern end of the Huichol “geography” and final destination of the

pending from a final consultation with the local communities. Both the Huichols and the local mestizos have been deeply involved in the management plan contents through workshops organized by the State’s environmental protection agency.

Being the Potosino plateau one of the most compromised areas in Mexico due to poverty and massive emigration to other national cities and abroad, the management plan mandate is to safeguard the Huichol cultural heritage while on the other it counterbalances the local communities’ pressure upon the area’s natural and cultural resources by promoting a sustainable use of the area’s natural resources while enforcing respect for the Huichol sacred sites.

The area’s management plan contemplates core zones for conservation and ritual use together with their buffer areas. The areas set aside for Huichol ritual use are the hills of Cerro Quemado and Cerro Grande and water sources and bodies by the names of Mixaminjui, Tati Matinieri and Tui Mallau.

While many conservation organizations and other stakeholders, including government agencies, currently acknowledge the importance and values of local people’s involvement in protected areas management, barriers still exist to implement truly inclusive models. What Wirikuta is trying to change is the premise that the presence of the Huichol pilgrims is seasonal, their participation in the management of the reserve is to occur though the very same management body of the reserve is yet to be defined. Local communities have requested the permanent presence of Huichol representatives in the reserve’s management team, a request that is highly unusual and points out to a relationship of mutual respect between the local inhabitants of the reserve and the Huichol pilgrims. Under the contemplated inclusive/participative management scheme, the cultural assets of the reserve are to be managed then by their very same users, that is, the Huichol.

Land tenure status: Ejidos and private lands

Monitoring and Evaluation System (if any): NA

Relationship to formally declared protected areas or other Sacred Natural Sites: Relationship to international categories (World Heritage Sites, Biosphere Reserve, Cultural Landscape, etc.):

5. Cultural Significance

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ancestors and deities in the pilgrimage they undertook to witness the birth of the sun. Wirikuta is also the sce-
nario where the first hunt of the deer took place: it was from the deer’s footprints that the peyote, the sacred
cactus, was born. In the center of the Huichol universe is Teekata (in the Huichol community of Santa
Catarina) the very site where the sacred fire is kept.

The eastern pilgrimage to Wirikuta begins per se at the takipa. It is there that the marakames and the jicareros
begin preparing their offerings, practice abstinence and stop ingesting salt to make themselves ready for the
pilgrimage during which the jicareros are to be known as the peyotees. Not all the jicareros undertake the
sacred pilgrimage since some stay behind to look after the takipa and wait eagerly the peyotees return.

Societal role, meaning: Wirikuta represents a vital space within the Huichol cosmogony. Here they enter in
communion with their deities by means of the Enlightened Divinity, the Peyote Deer, the jicaro, the flower that
talks. With this institution, peyote, their gods reveal the distribution of powers and duties, which sustain their own
lives; the way in which intelligence and eny were born; the gift granted to each one of them, the lineage of
the gods, and finally, the history of creation starting from chaos. In other words, this is the way the gods reveal
their cosmosmism. This feature in their religion, the vivid contact with their gods, is what distinguishes it from
others based on acts of faith.

Secrecy Status: does not apply

6. Current Situation

Strengths, weaknesses, opportunities, threats: At present, the development of extensive goat raising has
affected the natural vegetation by modifying its structure and causing a severe impact on its flora and fauna.
On the other hand, the strong appeal the region has at an international level, in recent years has caused a
notable increase of visitors in search of mystical or psychedelic experiences. This unorganized tourism gener-
ates an additional impact on the surroundings, including the transformation of the Huichol sanctuaries and
the unrestricted picking of peyote, which has caused the destruction of distribution areas of the plant. Other
threats that fall upon Wirikuta are: the expansion of its agricultural frontiers, that give way to the fragmenta-
tion of the territory with roads and breeches; the picking and illegal traffic of off flora and fauna species; the over-
exploitation of aquifers; the pouching of offerings that the Huichos place in the area; furthe hunting and for-
est fires in the mountain range of Catavina.

Government and NGO involvement: Several international and national organizations have begun to spe-
cifically address the need to recognize, protect, and manage sacred natural sites. However, these individual ini-
tiatives have often been isolated and have found it difficult to generate the required support.

The interest elicited by the experiences drawn from Wirikuta prompted the celebration in Mexico City in June
2001 of the 1st International Symposium and Technical Workshop on Sacred Natural Sites to promote cooper-
ation among those organizations interested in this issue. The workshop was organized by Mexico’s
Environment Ministry, the United Nations Environment Program, the local NGO Music for the Earth and WWF
Mexico Program. Representatives from both national and international indigenous groups, the Inter American
Development Bank, the University for Peace, the World Conservation Union-ICUN, UNESCO, the Rosgberta
Menchu Tum Foundation, and the National Indigenous Institute of Mexico agreed on the need to anchor expe-
rences on the ground testing the viability of sacred natural sites as a conservation tool and to pursue a com-
mon initiative on this important subject.

Financial support, if any: One of the financial mechanisms set aside for the management plan effective imple-
mentation is that of a trust fund specifically designed to support the state’s network of protected areas. The San
Luis Potosí Network of Protected Areas Trust Fund (FANPES), created on May 2001, is to support the state
protected areas beyond the current state administration. The trust fund initial capital was of approximately
USD 80,000.

7. Information Sources

References/Bibliography: NA

Visuals: NA

Graphic materials/visual aids: NA

Other: Lessons learned that might help other Sacred Natural Sites managers: It is of key importance when
proposing Sacred Natural Sites around the world to set up a legal recognition of the sites as such. In this
sense, the San Luis environmental law sets a ground breaking precedent towards the eventual legal recognition
of sites of such nature around the world.

Other: Annexes (if pertinent, decrees, pertinent legislation, etc.): State Environmental Law.

Decree establishing Wirikuta as a Sacred Natural Site (In Spanish).

Decree published in the Federal Register Official Journa1 on February 11, 1975 in which Tiburón Island ownership
is restituted to the comcaac.

Decree published in the Federal Register Official Journa1 on November 20, 1970 in which the continental territory
is restituted to the comcaac.

OIT 169, Articles. 13 and 15.

International Pact on Civil and Political Right Art. 6.7, 27

United Nations Declaration on Indigenous Peoples Rights Art. 3: “Indigenous Peoples do have the right to free
determination and in light of this, the freedom to choose their political status while pursuing their economic,
social and cultural development.

Art. 12.

Mexican Constitutional Art 2: Where the Mexican nation is recognized as a pluricultural state.

Mexican Agrarian Law Art. 106

Mexican General Protection Law for the Environment Art. 44

Convention on Biological Diversify, Art. 8j

ANNEX 10

TIBURON ISLAND

1. Name of the Site (native and western denominations)

Name: Tiburon Island within Seri territory. Native Denomination: The Seri name of the island is Taheöjc in
the heartland of the Comcaac (seri) territory. The Inferrillos Channel between the island and the mainland
(known as Nepi Corriente) does also belong to the seris who have exclusive fishing rights over the Channel.

Origins and significance, spiritual and cultural context: Tiburón Island – which has been occupied by the
seris for approx. 2000 years – is that name which was given to Taheöjc during the European colonial period. In
a historical context it is hard to know with a 100% degree of certainty what Taheöjc meant/represented for
the comcaac. This is mainly in part due to the ethnocentric interpretation of the Europeans when they first estab-
lished contact with the indigenous groups of the Americas. This view of the world completely ignored the
indigenous interpretations of the lands they were about to conquer. In the very few descriptions available from
this time describing the comcaac they have null reference to their own belief system and to their ways of organ-
izing themselves politically, socially and productively. They were simply described as individuals “without
faith, law or king”. Seri traditional oral testimonies consider Taheöjc a legacy from their ancestors, a place
where the seri cosmosmism is embodied in each one of its natural features.

Indigenous and non-indigenous groups involved: Comcaac is the native denomination for the Seri indigenous
group. This group has inhabited the Sonoran Desert for approx. 2000 years now in a territory that encompass-
s the central desert coast, Tiburón Island, San Esteban Island and other islands such as San Lorenzo and Anchorage As de la Guarda. The mainland portion of the seri territory is located in the Gulf of California Region. It is

widely assumed that the comcaac were organized in blood related subgroups being nomads, fishermen and
hunters. Some authors maintain that the ethnic group was conformed by six clans with their correspondent ter-
ritories which were well defined according to the use given to their natural resources (Mosek L.). Other
authors sustain though that their tribal organization was rather flexible and highly influenced by environmen-
tal, demographic, political and economic conditions (Sheridan). When the Spaniards did arrive to comcaac
territory, only one or two of these groups occupied Tiburón Island on a permanent basis maintaining occasion-
al communication with other clans even other indigenous groups. The other groups would join the island
permanent settlers when forced by foreign pressure. Some of these clans were totally wiped out such is the case
of San Esteban Island settlers (Brown).

The seris did suffer –together with other Mexican indigenous groups- the arrival of the Spanish conquistadors and
most recently the impact of the Mexican government unilaterally ways. According to oral traditions the seris
were in the brink of extinction in the early 1900’s the total population amounting to only 70 individuals that
took refuge in San Luis Island against outside aggressions that also resulted in the irreversible fragmentation
of their original territory. It was only thanks to their spiritual nature that the Seri were able to survive as a
group. Today, they show a cohesive and solid social structure that is the foundation of their cultural identity.
At present, the seris amount to a total population of approximately 900 individuals their main settlements
being Punta Chueca in the municipality of Hermosillo and Desemboque, municipality of Pitiquito, both in the
state of Sonora. Their local economy heavily depends on national and international economic cycles. Their
main subsistence activities are focused on the exploitation of local fisheries, art crafts, hunting and the recollec-
tion of fruits and herbs from the desert.

Their productive activities are organized per families though there have been examples of cooperatives mainly
in the fishing sector. Their economy though is of a highly precarious nature and they do suffer from a marginal-
ization and poverty levels that do constitute the very threat upon the conservation of their natural resources.
2. Location and size
Geographic location: country, province/state/department/latitude/longitude: The Comcáac territory encompasses Tiburón Island and the mainland section of the central Sonoran Desert. In addition, and by presidential decree, the Infiernillo Channel and the Islands adjacent waters were decreed as exclusive fishing rights areas for the Comcáac.

Tiburon Island belongs to the Tiburón-San Esteban Island system/archipelago located between 28° 39' 10'' and 29° 22' 00'' latitude North and 112° 13' 20'' and 112° 37' 40'' latitude West.

Extension in Hectares: Tiburón Island has 129,756 has while the continental counterpart of the Seri territory amounts to a total of 93,322 has.

3. Protection status
If within the limits of a protected area, specify which:

The Comcaac territory encompasses Tiburón Island and a mainland section in the central Sonoran Desert (conformed as ejido land). The same presidential decree recognizes the Seri as the legitimate owners of Tiburón Island.

Property ownership when it comes to the management of their natural resources but are also seeking to incorporate from the community's traditional knowledge systems. In summary, the Seri are not only trying to guarantee living evolution labs. Except for Isla Tiburon, temporary dwelling of Seri Indians for many centuries, all other sacred sites have been incorporated into the Reserve Area and Refuge for Migratory Birds and Wildlife of the Gulf of California. The Seri have a general management plan that includes Tiburon Island. The management plan clearly establishes and recognizes the rights given to the Seri by the national constitution, the OIT 169 and the Convention on Biological Diversity. It was from this main plan, the management program was prepared with emphasis on the administration of the Tiburon Island. This effort has been coordinated by the Reserve authorities showing an effort to progress a via a social participation through the management plan consulting process is still in the very early stages. The community places high expectations on the plan potential to generate sustainable development projects for the community.

The monitoring of the UMA’s proper management is carried out by a group of so-called “paracocologists” that do autonomous the wellbeing of the popcorn species. This group is composed by young seris and is supported by the National Autonomous University of Mexico as well as the local NGO “Unidos para la Conservación”. There are also projects to monitor marine turtle species supported by the local NGO Comunidad y Biodiversidad A.C. (COB) where the seis do play an active role.

Relationship to formally declared protected areas or other Sacred Natural Sites:

None to international categories as such. It is worth mentioning though that the Seri are actively pursuing sustainable development strategies in the management of their territory. Among those explored is worth mentioning the fact that the UMA’s (Units for the Conservation, Management, and Sustainable Use of Wildlife), a management tool derived from national environmental policies. Tiburon Island has also been incorporated into the Reserve Area and Refuge “Islands of the Gulf of California”.

4. Environmental Significance

Ecosystem Type/Uniqueness: The Seri Territory is located in the Gulf of California, one of WWF’s Global 200 ecoregions. Located in Northwestern Mexico, the Gulf of California extends from the Colorado Delta River to Cabo Corrientes, where the Baja California peninsula has designed dam projects and to Cabo Corrientes, in the state of Jalisco. Its more than 900 beautiful islands and islets and isolated portions of the Sonoran Desert are considered living evolution labs. Except for Isla Tiburon, temporary dwelling of Seri Indians for many centuries, all these islands are uninhabited.
The Gulf of California accounts for a mere 0.008% of the world’s sea but it has an outstanding diversity of marine mammal species: 34 species, including the sea lion—the only Pinniped in this gulf—and the sea otter (the other 32 species account for one third of the world’s cetaceans). It also provides the refuge for one of the world’s most endangered cetaceans: the Vaquita-Porpoise, endemic to the Upper Gulf of California. On the other hand, in its subtropi- cal and temperate waters three of the world’s two largest whales: the blue whale and the fin whale. This vast, the outstanding diversity of marine mammal species is not the only reason why the Gulf of California has been given top priority in a wide variety of conservation agendas. Fishing boats off the lucrative blue shrimp, a species so large so in size that a single individual can be worth between $3.00 and $3.50 USD. In addition, some of the Gulf islands serve as important nesting sites for migratory and resident fish species and breeding grounds for sea lion colonies.

In addition to its marine and coastal biodiversity, on the desert hills that surround the Gulf, stand the world’s largest cacti species. The Sahuaro and Cardon cactus tower over the desert and can reach heights of up to 15 meters. Also, the wetlands that spread along the eastern coastline are part of a vital intercontinental migratory corridor between North and South America, the Pacific Flyway.

The comcáac territory encompasses a portion of the Gulf of California marine ecosystem and a territorial por- tion of the so called Sites of Sacred Nature. The sites of Sacred Nature, the so-called areas inhabited by the ancestors of Taheöjc, result from a process of recreation of the seri culture where the old myths and the recent survival exploits do become entangled to produce the current vision.

Taheöjc results from a process of recreation of the seri culture where the old myths and the recent survival exploits do become entangled to produce the current vision.

Strengths, weaknesses, opportunities, threats
The information described below has been generated by the

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importance for their economic survival as well as for the symbolism it holds for their culture and beliefs. It is quite unlikely that without Taheöjc’s cohesive role as an axis of the seri universe, their society would have been by now disintegrated in light of the continuous threats and challenges it has faced throughout the years.

Strengths
Strengths, weaknesses, opportunities, threats
The information described below has been generated by the

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Taheöjc results from a process of recreation of the seri culture where the old myths and the recent survival exploits do become entangled to produce the current vision.
ty is decimating/devastating the remaining patches of marine wheat (Zoostera) mainly in the continental coast of the Channel. This situation worries them greatly since the Knot; (the comcáac name for this marine wheat) is a key component of their traditional diet consisting mainly of corn and beans. Catholic missionaries have made some progress improving living conditions for the Rarámuri but they haven’t succeeded in overcoming the current economic problems by attaining a long term, sustainable and communal economic development, that would eventually allow the reapropria-
tion of their culture and natural resources, ensuring the self management of the territory’s rich biodiversity and eventual their self governance recognized as a Mexican Indigenous group.

Government and NGO involvement: The administrative context on comcáac territory is rather complex and complicated given the vast majority of public institutions already involved in addition to the variety of public policies implemented in the area. The federal Administration encourages an active role of about three-to-one. This work is going to focus on the Tarahumara Indians, who call themselves Rarámuri “he/she who walks well”.

Origin and significance, spiritual and cultural context: The Tarahumara is only a corruption of the word Raramuri: “Tarahumac, inverted as Raramurac”, thus, Tarahumac. The Rarámuri feel themselves to be an integral part of the land and nature, since all indigenous peoples always believe that the land – their territory- is a vital, integral part of their lives. And so it is for the Rarámuri, the land – the Sierra, the canyons, the forests - being as well the place where God put them. God, which in the Rarámuri concept is Father and Mother at the same time as is constantly repeated by their “governers” in their sermons or novelties.

7. Information Sources

References/Bibliography: Diana Luque and her various publications

Videos: N/A

Graphical materials/visual aids: N/A

Other: Lessons learned that might help other Sacred Natural Sites managers: The Sacred Natural Sites initiative is a very innovative proposal that can effectively match the challenges faced by many indigenous communities when it comes to safeguarding the biotic nature/culture.

The comcáac need to choose their rightful authorities always keeping in mind the respect towards the com-

community main beliefs.

One needs to follow up on the footsteps of the San Luis Potosí environmental law to advance the legal recog-
nition of these sites. The initial work can be conducted by indigenous and environmental commissions.

The community desire to keep in secret the location of their sacred sites needs to be respected. Their right upon

their intellectual property must be respected especially by those institutions working to support the comcáac cultural and natural resources.

The “community timing” needs to be respected. Sacred Natural Sites are of crucial importance for their sur-
vival and of a very delicate nature. This is why the community must take its time in moving forward--if so decid-
ed--with the protection of these sites.

The communities’ sacred sites can only be known publicly only with the communities prior consent.

Other: Annexes (if pertinent, decrees, pertinent legislation, etc.); Decreto published in the Federal Official Journal on February 11, 1975 in which Tiburon Island ownership is restituted to the comcáac.

Decree published in the Federal Official Journal on November 20, 1979 in which the continental territory is restituted to the comcáac.

OIT 169, Articles 13 and 15.

International Pact on Civil and Political Right Art: 6,7 y 27

United Nations Declaration on Indigenous Peoples Rights Art. 3: “Indigenous Peoples do have the right to self determination and in light of this, the freedom to choose their political status while pursuing their economic, social and cultural development.

Art. 12.

Mexican Constitutional Article 2° where the Mexican nation is recognized as a pluriarticultural state.

Mexican Agrarian Law, 106

Mexican General Protection Law for the Environment Art. 44

Convention on Biological Diversity, Art. 8j

ANNEX I THE TARAHUMARA SIERRA

1. Name of the Site (native and western denominations)

Name: The “Mystical Barrancas” are a group of deep canyons that encompass the Urique, Copper, Batopilas, Sinforosa and Guaynopa Canyons. These Barrancas are one of the greatest canyon systems on earth. They con-

form the heart of what is known as the “Sierra Tarahumara”. Four of the most traditional Native American societies in North America—the Rarámuri (Tarahumara), Okans (Northern Tarahumara), O’odham (Mountain Pima), and Wurji (Guarijio)—have their homelands here, and each of these societies has its own distinct lan-
guage. In addition, the region includes numerous communities of Spanish-speaking Mestizos, who now out-

number the Indigenous residents by a factor of about three-to-one. This work is going to focus on the Tarahumara Indians, who call themselves Rarámuri “he/she who walks well”.

The main threat to both the survival of the comcáac culture and the conservation of their territory is that of their political and economic disadvantage/marginalized situation. This results in internal conflicts that are to be solved at a very high cost.

Opportunities: The community faces the challenge of overcoming the current economic problems by attaining a long term, sustainable and communal economic development, that would eventually allow the reapropria-
tion of their culture and natural resources, ensuring the self management of the territory’s rich biodiversity and eventually their self governance recognized as a Mexican Indigenous group.

Lastly, one of the main environmental problems affecting the comcáac is that of the proper disposal of domes-
tic trash. There is not a municipal service to collect the garbage generated by the community and this accumu-
lates in the houses perimeters at an alarming rate. To this date, a long term solution has not been found. A similar situation is that provoked by the lack of drinking water in the area. The communities heavily depend on its weekly periodic supply.

The comcáac self sufficient old economic ways have been replaced by modern monetary exchange systems.

The main resources of income rely now on fishing activities, arts/center production, hunting permits and small abarrotes shops. It is this precarious economic situation that mostly threatens and elicits their cultural trans-
formations with their associated impacts upon the territory natural resources.

Threats: The main threat to both the survival of the comcáac culture and the conservation of their territory is that of their political and economic disadvantage/marginalized situation. This results in internal conflicts that are to be solved at a very high cost.

Opportunities: The community faces the challenge of overcoming the current economic problems by attaining a long term, sustainable and communal economic development, that would eventually allow the reapropria-
tion of their culture and natural resources, ensuring the self management of the territory’s rich biodiversity and eventually their self governance recognized as a Mexican Indigenous group.

Government and NGO involvement: The administrative context on comcáac territory is rather complex and complicated given the vast majority of public institutions already involved in addition to the variety of public policies implemented in the area. The federal Administration encourages an active role of about three-to-one. This work is going to focus on the Tarahumara Indians, who call themselves Rarámuri “he/she who walks well”.

Origen and significance, spiritual and cultural context: Tarahumara is only a corruption of the word Raramuri: “Tarahumac, inverted as Raramurac”, thus, Tarahumac. The Rarámuri feel themselves to be an integral part of the land and nature, since all indigenous peoples always believe that the land – their territory- is a vital, integral part of their lives. And so it is for the Rarámuri, the land – the Sierra, the canyons, the forests - being as well the place where God put them. God, which in the Rarámuri concept is Father and Mother at the same time as is constantly repeated by their “governers” in their sermons or novelties.

Indigenous and/or traditional groups involved: More than 50,000 Tarahumara indians live in the Sierra Tarahumara, the heart of the Mexican State of Sonora, the Mexican territory, in a territory that covers approximately 54,000 square kilometers in the southwestern tip of the state of Chihuahua. Isolated within this formidable topography, the Tarahumara retain many of their traditions. Many still live in caves and log cabins and subsist on very basic agriculture con-

sisting mainly of corn and beans.

The Tarahumara are famous for running long distances. Running is so significant to the Tarahumara that in their own language they call themselves “Rarámuri” – those who walk well. Traditionally the Tarahumara hunt-
ed by chasing down and exhausting deer, then driving them over the cliffs to be impaled on wooden sticks. Today they run great distances of 160 km. (or more –and without stopping-) through rough canyons, kick-

ing a small wooden ball ahead of them.

A tradition of quite different sort is the trisquimanda, a raucoes gathering in which they consume copious amounts of tequitio, a potent corn beer.

Catholic missionaries have made some progress improving living conditions for the Rarámuri but they haven’t?
The Sierra Tarahumara, a major component of Mexico’s northern Western Sierra Madre, is a spectacular region of high sierras and deep canyons extending for nearly 1000 kilometers from just south of the United States border through the southernmost Mexican states of Chihuahua, Sonora, Durango, and Sinoloa.

Shamans/Seers/ewe perform a key role in the community and are the only members of the Tarahumara permitted to consume peyote; in fact, they often take peyote—jicuri—in order to perform a bizarre dance to cure the sick.

2. Location and size

Geographic location: country, province/state/department/latitude/longitude: The Sierra Tarahumara, a major component of Mexico's northern Western Sierra Madre, is a spectacular region of high sierras and deep canyons extending for nearly 1000 kilometers from just south of the United States border through the southernmost Mexican states of Chihuahua, Sonora, Durango, and Sinoloa.

The main system of canyons' location and depth can be summarized as follows:

- Urquía Canyon (1879 mts) deep 10 km. South of Urique
- Sinforosa Canyon (1830 mts), located in Ciudad de Guerachi
- Batopilas Canyon (1800 mts) 10 Km. North of Batopilas
- Copper Canyon (1790 mts) At Urique
- Guaynopa Canyon (1620 mts) 15 km. North of El Poraja Bridge

Extension in Hectares: NA
Spatial classification of sacred entity: NA

3. Protection status

If within the limits of a protected area, specify which:

- Current authority (government, community, religious or spiritual group)
- Historical evolution of management authority:
- Land tenure status:
- Monitoring and Evaluation System (if any):
- Relationship to formally declared protected areas or other Sacred Natural Sites:
- Management instruments, if any (management plan, co-management model, community agreement, land use plan, other):
- Land use plan, other:
- Management authority:
- Land tenure status:
- Monitoring and Evaluation System (if any):
- Relationship to formally declared protected areas or other Sacred Natural Sites:
- Management instruments, if any (management plan, co-management model, community agreement, land use plan, other):
- Land use plan, other:
- Management authority:

4. Environmental Significance

Ecosystem Type/Uniqueness: Ranging in altitude from around 200 meters to over 3,000 meters, the region is characterized by a tremendous diversity of tropical, subtropical, and temperate flora and fauna, including a number of endemic species. As stated earlier it also is an area of great cultural and linguistic diversity.

Diverse types of forests spring over 5.5 million hectares of Mexico, 28% of the nation’s forests. These forests have great biodiversity value, produce a wide range of economic benefits, and are critical to the well being of rural Mexican communities.

The pine-oak forests—one of WWF’s Global 200 ecoregions—the most abundant vegetation over the ridges and plains of the Tarahumara canyons are among Mexico’s most abundant forests. They cover 10% of the national territory (3.8 million hectares), springing throughout its main mountain chains: the Sierra Madre Oriental, Sierra Madre Occidental—the area of this study—Sierra Madre del Sur and the Transvolcanic Belt.

Mexico is not only home to 50% of all known pine species, but also harbors a remarkable 135 species of oak (compared to the 73 found in the United States and Canada together). Many endangered plants of agricultural and commercial importance, including maiz, originated in these forests. This ecosystem is also noted for its exceptional vertebrate diversity.

Priority Terrestrial Region – CONABIO: Yes
Hydrological Terrestrial Region – CONABIO: Yes

Type of vegetation (primary, secondary): Primary
Degree of conservation: Excellent
Watershed protection: Situated along the Continental Divide, the Sierra Tarahumara also includes the headwaters and tributaries of major drainage systems in both northern Mexico and adjacent areas of the United States including the Rio Conchos, of key interest at present for WWF’s conservation efforts in the region. Threats to the region’s biocul-tural diversity potentially will have very negative consequences for areas all along the US-Mexican border.

Other:

5. Cultural Significance

Importance for indigenous and traditional communities: In a general sense—since no concrete sites have been identified as Sacred Natural Sites or as centers of worship for the Rarámuri—this area is of great cultural and historical importance.

From the time of the very first excursions into their territories by miners seeking gold and silver, they were forced to work in the mines and were treated as slaves. Their best lands were taken from them, and they were considered to be parasites. As conquered peoples, they had no rights and were treated as such. Although military force was used to expel them, they rebelled from time to time. They suffered wholesale and this brought about the retreat of the vast majority to more remote sites where they could live in peace, although this meant giving up their best lands. Others opted for a strategy of peaceful resistance and working in the mines which was hard for them since this entailed penetrating into the bowels of the earth, near which site their religion believed in the entity who lives below is found, in contrast to repel hetemee, God, who lives above.

Their sense of brotherhood is well known: mutual assistance is the norm in agricultural tasks, in the construction of a house or fence, or in any endeavor which requires many persons. As recompense, some pinole or beans and tortillas are shared, but the principal attraction of these endeavors is tequino – butcher’s typical corn beer.

Upon being abandoned by the clergy when the Jesuits were expelled by King Charles III of Spain from their missions and being left alone for almost a century and a half, the Rarámuri were at liberty to reinterpret what they had learned from the missionaries and to cast their Christianity in their proper symbolical and ritualistic molds, putting aside what was meaningless to them while conserving and adapting the rest to their cultural and symbolical expression.

This would have been impossible for missionaries to have done, given their conceptual, western mind. For the Rarámuri, what they learned then and what they learn today from their governors, or sacerdotes, more than definitions and concepts, is the connection between life and teachings; in other words, they do not know how to verbal-ize or conceptualize what they have been taught. They must simply do it by living their daily lives.

The ancient missionaries attempted to assemble the Indians together by having them live in villages in order to as sim-ply communications, but they only succeeded in convincing them to hold their meetings at the church, which the Indians called the village. Having thus organized them, the missionaries also exercised great influence as regards the churches and religious rites which exist down to the present in Rarámuri communities.

The principal office is that of the Governor, the sitamnie or headman and spiritual guide of the community; he also judges disputes, which are settled in a tranquil manner so that peace can be restored to the community. The sitamnie are elected by common accord, and the Rarámuri always choose the most upright and preeminent individuals within the community. These do not lead by following a personal standard, but rather by following a communal consensus. In order to comply with his duties the sitamnie counts on the assistance of multiple sub-ordinates—generals, captains, mayors, constables, foremen, chapayones, abanderados, tenanches, and resuadores—the last four being personages of the friars. These posts which vary from one village to another are conferred by the sitamnie but always with the concurrence of the people and of the chosen person. These positions are conferred by the siríame but always with the concurrence of the people and of the chosen person. These are positions of public service and are not positions of power or lure. Although no economic rewards benefit the office holders, they do enjoy a certain prestige. The position is not held for any determinate period of time, but only for so long as the community is satisfied with the manner in which its duties are discharged.

The owrúame or healer/shaman is the principal personage in the ceremonies of life, illness and death and he plays an important role in the lives of all Rarámuri. Each Rarámuri has his owrúame, under whose keeping he is placed at a very young age. These priest-doctors have their own specialties. Some sing only at rutubári or yúmarí dances, others only at jicuri healing feasts. They all conscientiously fast and pray, complying with the demands which impose restrictions and abstinence and they are therefore called “righteous men” (owrúame). They are the wise men of the tribe, and as rainmakers, healers, and keepers of the heritage of tribal wisdom and traditions their influence is powerful.

Societal Status:

6. Current Situation

Strengths, weaknesses, opportunities, threats: The members of the Indigenous societies in the Sierra Tarahumara are subsistence farmers but they also depend upon a wide array of local plant and animal species for their survival. Their adaptation, developed over the course of several thousands of years, is oriented towards promoting rather than depleting the region’s biodiversity. According to the Mexico-North Research Network, this adaptation is now seriously jeopardized by the long-term environmental and social impact of...
large-scale economic activities in the region, beginning with mining four centuries ago, followed by ranching and lumbering and most recently tourism.

Large-scale mining operations, in decline for most of the last century, are underway again in the canyons of southern Tarahumara. Today, these activities are based on sophisticated understandings of the environment, understandings that are encoded, preserved, and transmitted through specific languages. At the same time, these societies depend for their survival on the continued integrity of their biological and physical environments. Such considerations suggest that these different forms of diversity are linked through conversation and that the causes and consequences of declining diversity in one area are directly related to those in the others.

Other: Annexes (if pertinent, decree, pertinent legislation, etc.):

OIT 169, Articles. 13 and 15.

International Pact on Civil and Political Right Art. 6.7 y 27

United Nations Declaration on Indigenous Peoples Rights Art. 3: “Indigenous Peoples do have the right to self determination and in light of this, the freedom to choose their political status while pursuing their economic, social and cultural development.

Art. 12

ANNEX 12

The SACRED CAVES OF THE WIND AND FERTILITY

1. Name of the Site (native and western denominations)

Name: Sacred Caves of the Wind and Fertility. Native Denomination: “Tun bokom min” or “Teopam” (Tepehnek Denomination)

Origins and significance, spiritual and cultural context: The Sacred Caves of the Wind and Fertility were declared as Sacred Natural Sites due to their importance for the Tepehnek, Nahua and Paneme Indigenous peoples of the Huasteca region in the southeastern portion of the state of San Luis Potosi. These caves could be compared to a western “university” in the sense that it is in these caverns that traditional knowledge transmission rituals still take place. They also represent the space where the “chamans” or traditional indigenous doctors seek enlightenment to heal the sick and where the purer’s” involucros ensure a safe pregnancy for those expecting a child. These caves do belong to a more extensive network of rock formations, springs, sources, caves and caves that, all together, perform a central role in the cosmology of the Huasteca Indigenous peoples. The Wind and Fertility caves are located within a relic of a tropical forest that covered in the recent past (through the 70’s) most of the Huasteca territory and which has been devastated by uncontrolled cattle grazing development throughout the region. This relict forest has become a reservoir of medicinal plants to be used by the local chamans.

Indigenous and/or traditional groups involved: Indigenous groups of the Huasteca region of the State of San Luis Potosi that is, the Tepehnek, Nahua and Paneme. These are scattered throughout a geographic area that encompasses 18 municipalities though most of the population (approx. 168,072 individuals, a 46.5 % of the Huasteca total population) is located in 13 municipalities, those of San Martín Chuitlachuautla, Tamaulipan, Tampamulco, Tancanhuitz, Tarinamaz, Xilitla, San Antonio, Matlapa, Acultimil, Ciudad Valles, Coxcatlán and Huehuetlán. The 5 remaining municipalities encompass a total of approx. 6,616 individuals in Tamuin, San Vicente Tancuayalab, Tampamulco y Tanquián.

2. Location and size

Geographic location: country, province/state/department/latitude/longitude: These caves are located in the western end of the village of Huitzilayan, municipality of Huitzilayan, on the lower slopes of the Eastern Sierra Madre. Both caves are located in a private land known as “Rancho San Juanito” and approx. 100 meters away from a tributary of the Huichihuayán river in the Chumantzen Ejido. 99°00’00” latitude North and 21°47’21” latitude West. Both caverns are scattered throughout a geographic area that encompasses 18 municipalities though most of the population (approx. 168,072 individuals, a 46.5 % of the Huasteca total population) is located in 13 municipalities, those of San Martín Chuitlachuautla, Tamaulipan, Tampamulco, Tancanhuitz, Tarinamaz, Xilitla, San Antonio, Matlapa, Acultimil, Ciudad Valles, Coxcatlán and Huehuetlán. The 5 remaining municipalities encompass a total of approx. 6,616 individuals in Tamuin, San Vicente Tancuayalab, Tampamulco y Tanquián

The nearest cave to the approaching path, the one at the bottom of the hill, is known as the Cave of the Wind since, like most caves, a cold wind blows down it due to changes in atmospheric pressure. Its entrance, an ellipse 3.0m in width and 1.30m in height, leads to a hall that gives way to diverse pathways leading to other chambers and are enclosed. This cave displays two levels united by a mud ramp and a variety of ritual objects are scattered randomly. Votive candles are to be seen everywhere on top of rock formations together with copal burners, “papita” leaves covering the comestibles offered in the diverse rituals as well as wax figurines placed along the cave’s floor. The upper cave is known as the Cave of Fertility and has a smaller circular entrance which is located on a vertical wall. Access to this cave is made possible by a series of wooden stairs. Upon reaching the entrance one descends ending up in the cave’s main chamber. It is in this hall that the main rituals are performed by the side of the largest column in this chamber. This rocky formation is known as the “Godness of Fertility” and is surrounded by three smaller pillars growing towards the interior of the cave that according to tradition are the sons of the Goddess.

Extension in Hectares: 8.02-87 hectares

Spatial classification of sacred entity: Sacred Natural Physiographical Features

3. Protection status

If within the limits of a protected area, specify which: The caves were declared as Sacred Natural Sites Current authority (government, community, religious or spiritual group). Historical evolution of manage-
ment authority: At present, a Commission of local traditional doctors’ representatives – local denomination for shamans and healers – is being convened. This Commission will in turn choose those of them and respective commissions to be in charge of the area’s management. The environmental authority of the state, the so-called SEGAM, carried out the studies leading to the Protected Area declaration. The SEGAM is also in charge of coordinating the work of the traditional authorities of the region.

Management instruments, if any (management plan, co-management model, community agreement, land use plan, other): The management plan for the caves was expected to be finished this year but the lack of economic resources put a halt to its successful conclusion. The key components of this management plan are: (i) the selection and creation by traditional doctors of a Surveillance Committee with the mandate to facilitate and ensure the participation of the local community in the management of the caves. (ii) the importance of respecting the established routes to access the caves. (iii) the need to put a halt to the acts of vandalism upon the rock formations in the caves (columns, pillars, etc.) as well as the stealing of votive/talisman offerings by outsiders. (iv) the need to develop strategies to ensure the survival of the essence of these peoples culture. If one could compare them to modern western universities, their cultures are the ojite, the cafetillo, the chaca, the higueron and the jalamate. This type of vegetation has been greatly degraded by activities that have included the felling of trees, the cutting of wood, the burning of forestland, and the grazing of animals. (v) the need to develop strategies to prevent the occurrence of forest fires. (vi) the need to develop strategies that will allow the Fund to finance the maintenance of the caves. (vii) the need to develop strategies to ensure that the caves will be open to the public only under the guidance of a traditional doctor.

Relationship to formally declared protected areas or other Sacred Natural Sites: The Caves of the Wind and Fertility offer social cohesiveness to the Huasteca Indigenous groups by acting as the physical space where the most sacred components of their cosmology are reproduced. Each stone, each sacred element associated with the caves and their surroundings is a representation of the fundamental building blocks of their religious cosmology.

Protection Status: National

6. Current Situation

Strengths, weaknesses, opportunities, threats: These sacred caves are threatened by a series of environmental factors. Among them:

- Land use changes: The owners of the caves neighboring areas have expressed their intention to protect the remaining for-
est cover but there is no formal compromise in the long term.
- Forest Fires: Drought periods in the area are now more frequent increasing the occurrence of forest fires.
- Poaching: The last vestiges of local fauna are being poached by activities.
- Road Construction: The construction of local roads has had a severe impact upon this delicate environment. The use of dynamite to “open the way” on several local developments has inflicted huge damage to the remaining patches of(decrypt)
- Trash/Garbage disposal: Both the visitors and the users of the caves leave behind a lot of debris/trash. Most of the litter generated in the interior of the caves results from the various rituals performed.
- Damage to the caves: Visitors unaware of the spiritual value of the caves inflict damage upon their structures such as prof-
fit or break the columns and pillars in their interior.

The social use of the caves generates a series of problems. Among them:

- Accessibility of path: There are various alternative paths accessing the caves that have a severe impact upon the surrounding ecosystems.
- Stealing/votive offerings: Visitors who are ignorant of the sacred rituals performed in the caves perform harm or steal votive offers-
tings. There is no surveillance at the caves’ entrance.
- Lack of respect for ceremonies and rites: Some ceremonies are private, even sacred, and visitors do not show respect for these spiritual manifestations.

The need to protect these spaces to guarantee the safeguarding of these ancestral sites and beliefs is of crucial importance. In addition to the above list of threats, the uncontrolled development of infrastructure work (especially roads) and the con-
tinuing progress of the agricultural frontier encroaching these last refuges exerts a sense of urgency that adversely affects those interested in the protection of these sacred caves.

Government and NGO involvement: In addition to the state government’s initiative to create a protected area, the local NGO “Fundación Eduard Seler” for the historic and anthropological research is carrying out a project to boost the Huasteca culture that includes the signing of an agreement to recuperate one of the most important archaeological sites of the region, that of El Conchito in the village of Tunas.

Socio-cultural role: The Caves of the Wind and Fertility offer spiritual cohesiveness to the Huasteca Indigenous groups by acting as the physical space where the most sacred components of their cosmology are reproduced. Each stone, each sacred element associated with the caves and their surroundings is a representation of the fundamental building blocks of their religious cosmology.

Secrecy Status: No Applicable

7. Information Sources

References/Bibliography: Not included

Videos:

NA

Graphic/multimedia/visual aids: NA

Other lessons/observations that might help other Sacred Natural Sites managers: The management of indige-
nous sacred sites requires of a process where respect towards “other ways of being/existing” – the cultural dif-
ference from others- must exist to reconcile the various ways to understand life and nature. Western society teaches that management plans must then become flexible and permeated with this premise to be able to vali-
date and understand traditional indigenous management and protection of ecosystems. Other: Annexes (if pertinent, decrees, pertinent legislation, etc.): San Luis Potosi environmental legislation. Decree of declaration of the caves as Sacred Natural Sites (in Spanish)