



**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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Foreword

This report contains a methodological approach for systematically inventorying Sacred Natural Sites using, as a starting point, an analysis of ecosystem and habitat types. Pronatura Mexico, the country's largest and most influential conservation Non Governmental Organization, believes this innovative experience is of key relevance for finding new and original ways to become more efficient in the conservation of our natural resources. To grasp and translate into a methodological process a highly ethereal concept, such as that of the "sacred", must be applauded and we 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 uttermost 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 in hand with the preservation of our cultural patrimony. Pronatura hence adheres 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, languages and belief systems.

Our many years of experience in the conservation field also prompts our believing in the potential of Sacred Natural Sites as community protected 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 recently launched a Bio-Cultural Conservation Unit headed by the author of this research project.

On a final note, we are also proud of the support the Geographic Information System (GIS) department of Pronatura Mexico provided for this research project by elaborating the maps that support and validate 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 show and lead the way for other national conservation organizations and actors to follow.

Ing. Guillermo Barroso Montull

President

Pronatura Mexico

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 Sites, 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, to our knowledge, there have been no previous attempts to develop a methodology for systematically inventorying Sacred Natural Sites, using as a basis an analysis of both ecosystem and habitat types. UNEP's World Conservation Monitoring Centre (WCMC), 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 ensure support and effective management of biodiversity and culturally rich Sacred Natural Sites worldwide.

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/manager communities, natural, cultural and spiritual characteristics, state of conservation, management approaches, legal status, pressing threats, etc. It is also presumed that many formal protected areas in Mexico include Sacred Natural 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 even 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 *vis a vis* 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 while respecting both the desire for secrecy and the custodians' right to keep under control the data collected from such sites.

In response to this knowledge gap, experts participating at the Vth World Protected Areas Congress (2003) and other various meetings have reiterated the usefulness of building up registries of Sacred Natural Sites, always based on voluntary disclosure and informed consent of their traditional owners and managers. It has to be noted though 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 objective of this research is to set the grounds and facilitate the eventual creation of a national database of Sacred Natural Sites through the development of a methodology and tools for systematically inventorying Sacred Natural Sites that is to be based on an analysis of ecosystem and habitat types. Mexico, due to its cultural and biological richness, the Sacred Natural Sites it contains, and its ample and documented experience in protected areas and other conservation strategies, as well as in the studying of indigenous and traditional cultures, is a very appropriate country to serve as the pilot ground for testing a methodology and 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 traveled by the author in order to come up with the proposed inventorying methodology and tools: hence, the structure of the document seeks to highlight and explain the conceptual steps and phases that led to the development and preliminary testing of the methodology and tools proposed.

The document is divided into six main chapters that can be summarized as follows:

Chapter I 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 ideas and arguments of the discussion, a model that is to be used throughout the paper.

Chapter II seeks to establish the 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 physio-graphical characteristics, all with the common denominator of their "sacred" and "revered" status. It is in this section that key working assumptions are also established to further narrow down the definition of a Sacred Natural Site to be used in this research. This established, this segment moves on to illustrate the role played by Sacred Natural Sites in safeguarding biodiversity and indigenous and traditional cultural diversity. This section intends to demonstrate the validity of Sacred Natural Sites as effective bio-cultural conservation mechanisms in their own right. The international policy context benefiting and/or promoting this innovative conservation approach 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 clarified, the document explores and justifies in Chapter III the selection of Mexico for the initial testing of the methodology and tools proposed. This section summarizes the main biological, cultural and political traits that single out Mexico as the ideal testing ground for the outputs of this project.

Chapter IV builds on the analytical work captured in the previous chapters to concentrate in the methodological steps and tools proposed for inventorying Sacred Natural Sites. The chapter is divided into the five main phases proposed and envisioned within a framework that is to lead to the implementation of 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 time frame suggested for implementation of each of the phases and the benchmarks recommended to monitor the progress leading to a successful implementation of the proposed methodological framework.

This section also reflects, illustrates, and elaborates on 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. A detailed description of the various tools proposed is to be found in the corresponding Annexes section.

The document moves on to Chapter V 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 areas for further tuning of the methodology and tools. The discussion in this Chapter validates 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 exercises of a similar nature.

And it is with the overall Conclusion in Chapter VI that the document comes to an end when reflecting on the importance of not losing momentum and joining forces among national and international conservation actors to carry on and promote the effective conservation of Sacred Natural Sites worldwide, the methodology and tools proposed in this research project being only a stepping stone in a long road that still needs to be traveled for a long term and viable conservation of Sacred Natural Sites.

CHAPTER 1: Introduction

“There is a pleasure in the
pathless woods,

There is a rapture in the
lonely shore,

There is society, where none
intrudes,

By the deep Sea, and music
in its roar:

I love not Man the less, but
Nature more,

From these our interviews,
in which I steal

From all I may be, or have
been before,

To mingle with the
Universe, and feel

What I can ne'er express,
yet cannot all conceal”

Lord Byron

1. The Inherent Sacredness of Nature

The word “sacred” comes from the Latin “*sacrare*” meaning “to consecrate”: when evoking this term other connotations come naturally to mind: “adored”, “divine”, “exalted”, “holy”, “inviolable”, “religious”, “revered”, “spiritual”... (Thesaurus, First Edition, v 1.3.1.). 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 (Jeanrenaud 2001). The concept of the “sacred” in most societies is often associated with the “secret” or “forbidden”.

The sacred is opposite to the “secular”, “profane” or “common-place”. When extrapolated to a physical/natural context, such a *site*, one could venture to say that “a sacred site is frequently understood to mean a place set aside, with a point of entry, with a religious experience within” (Jeanrenaud 2001). The following quote, recorded in an inscription on the walls of an ancient Romanesque hermitage in the Saint James Pilgrimage Way of Spain, clearly describes this “sacred” 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 establish communion with that sacredness...when you reach the walls of Eunat, proceed to the temple and place yourself underneath 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...” (Inscription recorded in the walls of Eunat, Navarra, Spain 2006).

When doing the same linguistic exercise with the term “natural” synonyms such as “uncultivated”, “undomesticated”, “unmixed”, “unpolished”, “unprocessed”, “unrefined”, “whole” and “wild” appear (Thesaurus, First Edition, v 1.3.1.). As Jeanrenaud (2001) points out, there is considerable debate over the meaning of “*natural*” in the development and environmental literature: anthropologists hence conclude that what we consider to be “nature” and “natural” and “how we engage with the natural” varies across cultures and peoples.

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*: “I understand all this, not in my mind but in my heart, knowing how meaningless it is to try to capture what can not be expressed, knowing that mere words will remain when I read it all again...”.

It is a contrasted fact that 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”¹ cultural and religious approach towards nature. It is a fact that 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 terms² (Harmon 2001): indeed, for the enlightened sages of the Eastern tradition, the forest was “a world of wisdom, peace and spirituality”³ (Ramakrishnan 2003).

The cosmivision of indigenous and traditional peoples⁴ worldwide also manifests a profound understanding of the *inherent sacredness of nature* and the reverence it entails. These communities 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, Luque 2006).

Box 1 Sacred *Beyuls* in the Himalayas

The *Beyul* concept is rooted in the Nyingmapa 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 be as many as 108 *beyuls* in the Himalayas. Some *beyuls* – such as Pemaco 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 color of the
mountains is Buddha’s
body; the sound of
running water is his
great speech”

Dogen

¹ Anthropocentric: regarding the human being as the central fact of the universe; viewing and interpreting everything in terms of human experience and values.

² Ecocentric: recognizes that the ecosystem, rather than any individual organism, is the source and support of all life and as such advises a holistic and ecocentric approach to government, industry, and individual.

³ A strong feeling of human participation in the universal order pervades the Vedas, the ancient scriptures of the Hindu religion, which is an oral tradition of wisdom five thousand years old. This implies that humans are inseparable from their environment. The Vedas recognized harmony in Nature, therefore worthy of worship through the five Mahabhutas, the elements of existence: the earth, water, air, fire and Akasa (the void or nonexistence).

⁴ The term “indigenous” as used in this work, 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): whenever this paper refers to “indigenous peoples” the concept is applicable by extension to tribal peoples and to traditional communities or local communities embodying traditional lifestyles

Pre-Columbian societies in the Americas (Box 3) held the widespread view that the Earth and all its creatures were sacred, and therefore permission had to be sought before the resources could be used, or else the spirits of those resources would seek revenge (Hughes 1996, 1998 in Ramakrishnan 2003).

Box 3 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 snow-capped peaks, steeped slopes, deep canyons, and isolated valleys that contain an amazing diversity of micro-habitats 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 *Camac* (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 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 intangible 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 subjugates 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 expressing that "since sacred groves form an integral part of all indigenous and traditional societies in regions such as Asia and Africa (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 pro-

pitiate 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 symbolic 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 the 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 habitations such as the sacred groves and sacred water bodies. The sacred groves form the center of livelihood of local people and 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.

Source: Yogesh Gokhale in "Conservation of Biodiversity Rich Sacred Natural Sites: a Medium-Sized GEF Proposal"



"Our forests, lands, waters and wildlife are still healthy and rich in biological diversity, because as Shamanists, we behold nature with awe and reverence, and hold all life, even landscapes, as sacred"

Dr. Manishev,
Altai Republic

CHAPTER II: Rationale

1. What is a Sacred Natural Site?

How can one grasp, materialize and apply a methodological approach to such an “*ethereal*” concept such as that of the “*sacred*”? Indeed, one of the most challenging endeavors of this research project has been to come up with a standardized definition of a “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 including: “sacred site”, “sacred natural site”, “sacred landscape”, “traditional site”, “indigenous site”, “archaeological cultural site”, “cultural landscape”, “sacred land”, “sacred feature”, “site of cultural value”, “spiritual site”, “religious site”, “sacred space”, “ritualistic site”, etc. In what all authors coincide is in the fact that different cultures and individuals have assigned them all a special and revered *sacred status*.

2. Spatial Dimensions of Sacred Entities

Although the concept of the sacred is a dynamic one⁵, it can be conceptualized – for methodological purposes - along a *spatial scale* as originally proposed by Ramakrishnan (2003). Following, though redefining and expanding this original model, *sacred entities* are to be categorized in this research as follows: (1) *Spatially Disperse Sacred Landscape* (Boxes 6 and 7); (2) *Spatially Definable Sacred Landscape* (Box 8); (3) *Sacred Natural Physiographical Features* (Box 9) and (4) *Sacred Floral and Faunal Species* (Box 10).

Spatial Dimensions of Sacred Entities

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

Spatially Definable Sacred Landscape: having well-defined and cohesive spiritual and cultural norms and practices as well as geographic limits; extension and geographical limits ranging from 300,000 to 8 has. approximately.

Sacred Natural Physiographical Features: include a wide array of manifestations that can be contained within either Spatially Disperse or Definable Sacred Landscapes, ranging from mountains, oasis, valleys, rivers, lakes, caves, fo-rest groves, coastal waters, islands, wetlands, trees, groves of shrubs, stone arrangements, quarries, caves, ponds, outcrops, gorges, ravines, hills, rock holes, creeks, waterholes, sand hills, dunes, termite mounds, etc.

Sacred Floral and Faunal Species: include those communities of species that are attributed a sacred, ritualistic, and/or medicinal use by the indigenous and traditional community. Their presence confers a sacred status to either a Landscape or a Sacred Natural Physiographical Feature.

This proposed classification model shows that the “sacred” covers and permeates all “dimensions” and “scales” ranging from the most ample landscapes through variously sized natural physiographical features to the punctuality of the sacred floral and faunal species that render sacredness to the spatial entities containing them.

BOX 6 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 Goumukh in the higher reaches of the Garhwal Himalaya, the *Ganga* flows through the northern plains of the states 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 interconnected ecosystems bound together by the sacred river itself.

The Japanese Kii mountain region of Koyasan, Kumano Sanzan, Yoshino and Omine is another example of a Spatially Disperse Sacred Landscape, rich in biologically diverse temperate forests, Buddhist temples, and monasteries. Being a hub for cultural and religious interactions since ancient times, the region represents a blend of the Indigenous *Shinto* religion, based on nature worship and the Buddhism that came subsequently. Koyasan, 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

⁵ Sacred entities rely heavily on the presence of a homogenous ethnic or cultural community sharing similar values and experiences, on a strong shared belief in the spirit world and its pervasive influence in peoples' lives, and on a common acceptance of religious and cultural authority figures associated with these entities (Githitho 2003).

person climbs a mountain on his or her way to heaven; and that rivers and seas are holy entry points to paradise. In this landscape, the natural merges with the cultural heritage to form a complex but integrated whole.

Source: P.S. Ramakrishnan in “The Full Value of Parks: from Economics to the Intangible”

BOX 7 Sacred Entities: A Spatially Disperse Sacred Landscape in Mexico

The Huichols’ cosmivision 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: *Haramara* (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; *Hauxa Manaka* (Cerro Gordo –Fat Hill- in the state of Durango) representing the northern most point where the canoe of the goddess *Nakawé*, mother of all gods, finally rested and where the wind and the royal eagle, her messengers, were born; *Xapawiyeme* (Isla de los Alacranes – Scorpion Island- in the Lake of Chapala in the state of Jalisco) that represents the southern tip where *Watakame*, 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 destination of the ancestors and deities in the pilgrimage they undertook 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 *Teekata* (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: from Economics to the Intangible”

BOX 8 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 performance of Buddhist rituals is possible if the land and water are 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 treasures (*ters*) in such a way that the chances of a visionary recovering some time in the future would diminish (the last such discovery is thought to have occurred 540 years ago). Any major disturbance to the river system would upset 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 such as monasteries.

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

“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”

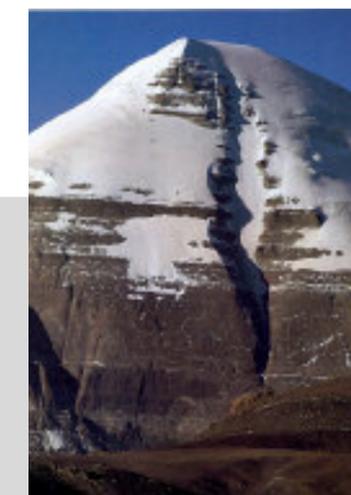
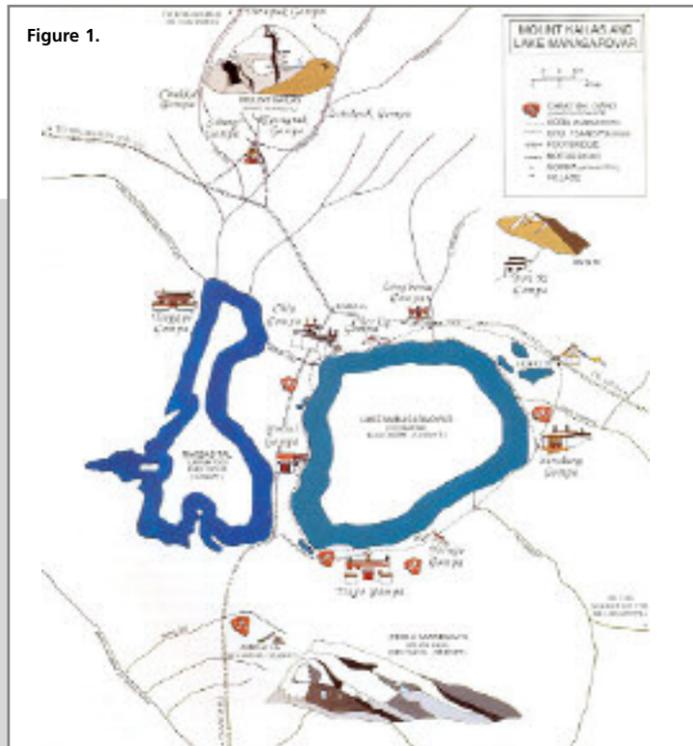


Photo: Johnson, R

Figure 1. Another example of a Spatially Definable Sacred Landscape is that of Mount Kailash in western Tibet. The sacred mountain is faced by two sacred lakes, each performing a symbolic role in this spiritual mandala. *Kan Rimpoche* (Kailash) is the end destination of one of the most holy pilgrimages taking place in Asia. Illustration taken from: Johnson and Morgan in “Tibet Sacred Mountain”

Box 9 Sacred Entities: Sacred Natural Physiographical Features in the Tanami Desert, Australia

“There are of course many approaches to environmental conservation and it is impossible and unnecessary for religious leaders to take on all of them. But it is indispensable for religions and religious leaders to identify a set of values which is needed as a foundation for our civilization of tomorrow. Re-evaluation of spiritual values is the most important agenda for humanity”

Teruaki Kawai in
“The Healing of Earth”

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 northeast. The major part of the Tanami Desert has been inhabited by Warlpiri-speaking aboriginal people for thousands of years. For Warlpiri, the landscape of the Tanami Desert is covered with sites that mark events and histories of the extraordinary *jukurrpa* beings and ancestors, whose essence remains in these places and that are usually linked to prominent natural physiographical features including; trees, groves of shrubs, stone arrangements, quarries, caves, outcrops, lakes, billabongs, clay pans, 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 stories and song cycles and materially 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 individuals who 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 sites also include those that have an association with several important *jukurrpa*. Of lesser significance are those places that signify only a minor event or “camp” in the travels of a *jukurrpa*.

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

Box 10 Sacred Entities: Sacred Floral Species in the Chihuahuan Desert, Mexico

Wirikuta, the land of the sacred “*peyote*” is located in the Chihuahuan Desert of the State of San Luis Potosi in Mexico. The Chihuahuan 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, 70% of its birds and 60% 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 *peyote*, where the “*jicareros*” novices eat the sacred cactus 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. Extensive goat ranching 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, has caused in recent years a notable increase of visitors in search of mystical or psychedelic 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 destruction of the distribution areas of the plant.

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

2.1. Sacredness as the Common Denominator

The common denominator of all sacred entities reviewed is that they have been set aside as “*holy*”, though the reasons for their revered status, as the literature shows, are quite diverse: they may be perceived as abodes of deities and ancestral spirits; as burial grounds of the revered ancestors of the community; spaces of ritualistic and initiation ceremonies; reference places of cultural identity; places of contact with the spiritual or communication with the “*divine*” reality; as sources of healing water and plants; scenarios of crucial battles amongst the communities’ ancient heroes; as the harbors of sacred plant and animal species; sites of revelation and transformation; the final destination of revered and ancient pilgrimages routes transcending geopolitical barriers... in the overall, they are places that do embody the communities’ spiritual beliefs (Oviedo and Maffi 2000, Jeanrenaud 2001, Luque 2006).

Common to them all is also the fact that these are areas where nature, the divine and spiritual 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).



Photo: Johnson, R

2.2. Working Assumptions

The term “**Sacred Natural Site**” is to be used in this research in a generic sense as to include those sacred entities - Spatially Disperse and Definable Sacred Landscapes, Sacred Natural Physiographical Features and Sacred Floral and Faunal species’ communities - 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, Luque 2006).

Other key working assumptions that further narrow down the 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*, currently “*in ritualistic use*”, rather than sacred sites of the world major 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, *sauf* for 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” (Box 11).

Sacred Natural Sites as viable mechanisms for bio-cultural conservation: this work 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. This working approach therefore has a dual character in that it reflects both cultural/spiritual features and environmental significance.

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 is to eventually conduct the inventorying of *only* those sites disclosed on a voluntary basis by the indigenous and traditional communities involved.⁶

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

“Jain cosmology recognizes the fundamental natural phenomenon of symbiosis 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 constituents”

From “Jainism” in “The Assisi Declarations”

⁶ Researchers with long term connections with a community, have often noticed changes in community attitudes over the years vis a vis their predisposition for disclosure of sensitive information. Sacred entities that were once strongly considered by communities to be highly restricted may later be considered to be less restricted or unrestricted; and vice versa. This underlines the need for ongoing consultation with communities over a long period of time about the secrecy status of their sacred entities.

Box 11 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 pre-historic 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, beliefs and ritualistic artifacts 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.

Adopted and adapted from: S. Jeanrenaud 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 Uvs Lake: Mongolia's most ancient lake

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 ecological zones – 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*, old burial sites, creating an ancient unique historic and cultural landscape.

Source: Norov Urtnasan in "The Importance of Sacred Natural Sites for Biodiversity Conservation"

3. Why Support the Conservation of Sacred Natural Sites (SNS)

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

3.1. Sacred Natural Sites Conserve Biodiversity

The literature consulted shows that many Sacred Natural Sites of indigenous and traditional peoples are areas of great importance for the conservation of biodiversity: for these 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

The *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 *Nong* 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 – 1,500 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 floristic biodiversity. Holy 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"



3.1.1. 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 promoting 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-restraining 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, 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).

"What is life? It is the flash of a firefly in the night. It is the breath of a buffalo in the wintertime. It is the little shadow which runs across the grass and loses itself in the sunset"

Crowfoot, Blackfoot Native American

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 has) 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 nine coastal *Mijikenda* ethnic groups.

According to *Mijikenda* 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 metaphorical and literal historic sense, the "home" of the community. This tended to be set at the center of the forest. At a secret spot near the central clearing the *finjo* is buried, a powerful protective talisman of the tribe which 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"

3.1.2. 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 primary vegetation of highly eroded ecosystems. When and if any, 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, Jeanrenaud 2001).

"We are convinced of the inestimable value of our respective traditions and of what they can offer to re-establish ecological harmony; but, at the same time, we are humble enough to desire to learn from each other. The very richness of our diversity lends strength to our shared concern and responsibility for our Planet Earth"

Father Serrini, Franciscan Minister

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 relict 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 area is an “island of vegetation” among extended desolation. 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 a Sacred Natural Site 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 Potosi. These caves could be compared to a western “university” since it is in these caverns that traditional knowledge transmission rituals do take place. These caves belong to a more extensive network of rocky formations, spring sources and coves that, all together, perform a central role in the cosmovision of the Huasteca indigenous peoples.

Source: Mercedes Otegui in “Conservation of Biodiversity Rich Sacred Natural Site: a Medium-Sized GEF Proposal”

3.2. Sacred Natural Sites Support Indigenous and Traditional Peoples Ways of Life

Sacred Natural Sites are important for the vitality and survival of indigenous and traditional cultures and their associated values. The literature reviewed has shown that Sacred Natural Sites’ conservation further promotes and is intrinsically associated with: indigenous and traditional peoples’ heritage, cultural identity, linguistic diversity, livelihoods and Traditional Ecological Knowledge (TEK). Some examples of this follow next.

3.2.1. 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, 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 relationship between indigenous and traditional peoples and their territories, an interaction that is engraved on the natural landscape through social and cultural values which prompt the occurrence of Sacred Natural Sites (Gündüz 2000).

3.2.2. Cultural Identity

According to various authors (Oviedo and Maffi 2000, Luque 2006, Toledo 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*. The authors consulted conclude that, together, cultural and biological diversities hold the key to ensuring resilience in both social and ecological systems (Box 16).

“I only went out
for a walk and finally
concluded to stay out till
sundown, for going out,
I found, was really going in”

John Muir

Box 16 Meli Snow Mountain (Khabadkapo) in Northwest Tibetan Prefecture of the Yunnan Province in China

In Deqe, local Tibetans believe that mountain gods, who live in the peaks, govern all the land, animals and people. Among all the sacred mountains, Meli Snow Mountain, the largest and highest, is of particular importance, not only for local Tibetans but for all believers of Mizong (*Kagyupa*, one of the most important branches of Tibetan Buddhism). With a peak at 6,740 meters above sea level and a total area 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 and offer sacrifices and to perform the Buddhist prayer practice of *Zhuanjing* (walking around the mountain in a *kora* that usually takes one month). Hunting, logging or anything that may be considered as “polluting” the mountain is strictly taboo. Even climbing is forbidden.

The sacred mountains have constituted the local framework for nature conservation, and large areas of forests have been successfully preserved in this region. In Northwest Yunnan, there exists a huge Tibetan sacred site system that combines sacred forests and mountains. Khabadkapo is positioned at the center of this system – *mandala*. Surrounding it is a number of lower mountain groups of gods. The famous Baima, Haba and Qianfo mountains are believed to be parts of this system, which encompasses not only the Tibetan area of Deqe, but also some areas in the Sichuan and Tibetan territories. Within the system, cultural and spiritual hierarchical rank stretches from the top echelons down to the community level. In this way, local Tibetan people share one or several sacred mountains at the regional and village levels and they also have their own sacred forests conforming the Tibetan sacred system of Northwest Yunnan.

Source: Luo Peng, Wu Ning, Yan Zhaoli and Pei Shengji in “The Importance of Sacred Natural Sites for Biodiversity Conservation”



“The art of sky and
mightiness of storms
have moved the spirit within
me, till I am carried away
trembling with joy”

Uvavnuk, Inuit shaman

Photo: Johnson, R

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.

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 in 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 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.

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, Khentii Khan, and Otgontenger mountains”. The decree pronounces the state’s support for initiatives to revive the mountain-worshipping 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 (Jeanrenaud 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* (Luque 2006, Jeanrenaud 2001) (Box 18).

Box 18 The Seri Sacred territory in Mexico

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

Seri traditional oral testimonies consider *Taheōjc* (Tiburon Island) a legacy from their ancestors, a place where the *Seri* cosmovision 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 *Taheōjc*. The *Seri*’s most beautiful folk stories are related to the spirits and deities associated with *Taheōjc Imozit* (the heart of Tiburon Island). *Taheōjc* is a vital part of the *Comcáac* being/essence, conforms their vitality as an indigenous group and is the axis around which revolves their cultural identity. Without *Taheōjc*, the *Seri* would no longer exist. That simple, yet that irrefutable. This is why *Taheōjc* is sacred for the *Seri*.

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

3.2.3. Ethno-Linguistic Diversity

The literature reviewed suggests a strong correlation between ethno-linguistic⁷ 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.

“But it is important to realize we are all trapped in mental constructs, and so we separate ourselves from reality; the whole world loses its aliveness or, rather, we lose our ability to sense that aliveness, the sacredness of nature. When we approach nature through the conceptualizing mind, we see a forest as a commodity, a concept. We no longer see it for what it truly is, but for what we want to use it as. It is reduced. This is how it becomes possible for humans to destroy the planet without realizing what they are doing”

Eckhart Tolle

⁷ “ethnolinguistic group”: this concept defines a human social unit that shares the same language and culture and uses the same criteria to differentiate itself from other social groups (Oviedo and Maffi, 2002).



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

Country	Rank, Total Number of				On Megadiversity List
	Endemic Languages	Endemic Vertebrates	Flowering Plants	Endemic Bird Areas	
Papua New Guinea	1 st	13 th	18 th	6 th	
Indonesia	2 nd	4 th	7 th	1 st	Yes
Nigeria	3 rd				
India	4 th	7 th	11 th		Yes
Australia	5 th	1 st	11 th	9 th	Yes
Mexico	6 th	2 nd	4 th	2 nd	Yes
Cameroon	7 th	23 rd	24 th		
Brazil	8 th	3 rd	1 st	4 th	Yes
Dem. Rep of Congo	9 th	18 th	17 th		Yes
Philippines	10 th	6 th	25 th	11 th	
USA	11 th	11 th	9 th	15 th	
Vanuatu	12 th				
Tanzania	13 th	21 st	19 th	14 th	
Sudan	14 th				
Malaysia	15 th	14 th			Yes
Ethiopia	16 th	25 th			
China	17 th	12 th	3 rd	6 th	Yes
Peru	18 th	8 th	13 th	3 rd	Yes
Chad	19 th				
Russia	20 th		6 th		
Solomon Islands	21 st	24 th			
Nepal	22 nd	22 nd			
Colombia	23 rd	9 th	2 nd	5 th	Yes
Cote d'Ivoire	24 th				
Canada	25 th				

Sources: Endemic languages: Harmon (1995: 22-28); Endemic vertebrates: Groombridge (1992: 139-141); Flowering plants: Groombridge (1992: 80-83); Endemic Bird Areas: Stattersfield et al. (1998); Megadiversity countries: McNeely et al. (1990: 88-90). In “Indigenous and Traditional Peoples of the World and Ecoregion Conservation: An Integrated Approach to Conserving the World’s Biological and Cultural Diversity”, Oviedo and Maffi, 2000.

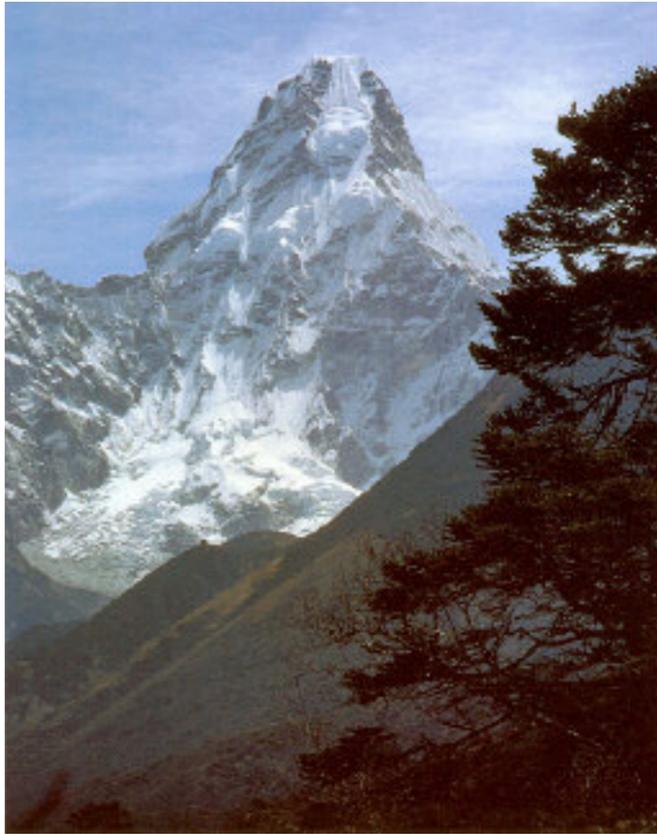


Photo: Johnson, R

Oviedo and Maffi (2000) highlight that conservation actors concerned about the loss of biodiversity should also be concerned about the loss of cultures and knowledge among indigenous and traditional peoples since these peoples have accumulated vast amounts of ecological knowledge in their long history of managing the environment. Such knowledge is embodied in languages⁸; however, as these become extinct, 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 transmission⁹.

Most authors reviewed conclude that success in conserving biological diversity is interconnected with the maintenance of cultural diversity on earth, and that, conversely, the loss of cultural diversity 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; Nietschmann 1992; Castilleja et al. 1993; Colchester 1994; Toledo 1994; Wilcox and Duin 1995; Alcorn 1997; McNeely 1997; Stevens 1997a; Posey 1999a; Maffi in press a, b; Toledo in press b in Oviedo and Maffi 2000) (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 alphabet, religions and customs. The versatile nature of the region regarding religious faiths, nationalities, economies, languages and alphabets adds significantly to its multi-layered cultural diversity, and forms a striking contrast to the coastal and middle parts of China.

The region also harbors a rich biodiversity: *Uygurs*, 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 protection 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, *Uygurs* have a tradition whereby they plant trees around their house when they first settle in their homes, considered to afford them protection. *Uygurs* also worship ancient and old trees, which symbolize rainfall and peace, consequently many ancient and old trees are revered as sacred and are hence well preserved.

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

3.2.4. Livelihoods

The literature shows that it is misleading to assume a *complete ban* on the use of natural resources associated with Sacred Natural Sites (Jeanrenaud 2000): 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 regulated by local customs and traditional norms usually encoded in the communities’ Traditional Ecological Knowledge which may promote a sustainable use of the resources involved (Boxes 21 and 22).

Box 21 Sacred Groves on Savanna Ecosystems in Ghana

The Ghana’s Northern Region is a savanna area marked by widespread environmental degradation such as over-grazing, bushfires, deforestation, agricultural expansion, village sprawl, and road construction. Among this generalized destruction, one finds small intermittent patches of forests with dense vegetation and closed canopies: they are the “sacred groves” which have survived the degradation of the environment because of traditional belief systems: as abodes of gods and/or 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 priests was sought. Based on the expressed needs of the local communities, afforestation using cash crops was carried out around the sacred groves. Fodder banks, woodlots, 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 its sacred sites which are closely related to the presence of spring water, which is the principal reason for the conservation of these mostly forested areas. The sacred sites also provide other resources for their living needs.

The high degree of endemic species found in these small sacred areas (1 to 2 has) reveals the importance of relict species and their contribution to the conservation of West Timor’s sacred sites. In fact, forests, *Fatus*, and other geographical formations such as limestone’s outcrops, small natural ponds and associated unique biota, caves, and other particular landscapes have been protected from degradation and destruction because of the traditional knowledge associated with them. The *Dawan* people believe that their Ancestors or God created all *Fatus* to provide water for them.

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

3.2.5. Traditional Ecological Knowledge (TEK)

The value of Traditional Ecological Knowledge (TEK) in providing a long-term perspective of ecosystem dynamics, based on the 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 indigenous and traditional communities, including the establishment of Sacred Natural Sites. Such communities have indeed a wealth of knowledge on the plant and animal species found in their Sacred Natural Sites and their territories as a whole, including their nutritional and medicinal properties and their role in maintaining species viability (Luque 2006, Oviedo and Maffi 2000, Toledo 2003).

Dealing with TEK may seem a straightforward issue for gaining a better understanding of local ecological 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 (Oviedo and Maffi 2000, Luque 2006). This involves a two step process of establishing proper working relations through protocol arrangements and following up with supportive action.

3.3. Sacred Natural Sites Support Indigenous and Traditional Peoples Spirituality

This research project recognizes that the spiritual values of indigenous and traditional peoples are what prompted in the first place, their *commitment* to protect their natural heritage being also their primordial motivation to actively engage in the conservation of their lands and resources and to create revered Sacred Natural Sites. On the other side, the Western world, anchored still on biased anthropocentric perceptions, needs and should promote a model of biodiversity conservation touched with a deep and committed humanistic approach to accommodate the inherent sacredness of nature (Wickramasinghe 2003) (Box 23).

*“Even in a single leaf
of a tree, or a tender blade
of grass, the awe-inspiring
Deity manifests Itself”*

Shinto, Urabe-no-Kanekuni

⁸ The most reliable indicator of cultural diversity is the number of languages spoken in a given territory. In today’s world there are 6,000 different languages, each spoken by a determined number of human beings. While the speakers of only 10 languages constitute half of the world’s population, nearly 90% of all languages spoken by populations fewer than one million people, who are mostly indigenous peoples.

⁹ Michael Krauss, of the University of Alaska at Fairbanks, an indigenous languages expert, has calculated that ten thousand years ago, when the earth harboured a population of 10 million human beings, more than 20,000 languages were spoken. UNESCO estimates that approximately 3,000 languages are at risk of disappearing and that each day 3,000 people, speaking one of these languages, dies.

Box 23 Adam's Peak Sacred Mountain Forest in Sri Lanka

“Flowers fly, flowers
swirl,
Going around the Cerro
Quemado
and from the heart of our
grandfather
the deer and the hikuri are
born:
the gods are speaking.
In Wirikuta there is a
flower that talks
and the arrow stuck in the
hikuri's core
understands the language
of the gods.
Who knows why the hills
speak in Wirikuta”

Huichol Song, “In the Land
of Peyote”

The cultural context of Sri Pada (Adam's Peak in English) is intimately connected with religion, history, belief systems, livelihoods and the local understanding of nature. Throughout Sri Lankan history, this mountain has been valued holistically: its conical-shaped peak is the highest point (2,243 meters) in the western shoulder of Sri Lanka's Central Massif and is the most outstanding feature of the whole range. The Peak Wilderness Sanctuary was declared in 1940. The sanctuary's importance for the conservation of biodiversity and the environment has been well recognized; however, its religious, cultural and social implications have not yet been fully endorsed. Several hundred years ago, Adam's Peak itself was considered an untouchable living organism by the local communities.

The sacred footprint - *Sri Pada or Siri Pathula* - is on the summit of this mountain range, and has more than 2,500 years of history. According to Mahawansa, the sacred relic is the footprint of the Buddha, who arrived in Sri Lanka around 577 B.C. The god *Saman*, the tutelary divinity or the territorial god of the peak wilderness, undertook the task and responsibility of safeguarding the relic - revered by millions of pilgrims annually - and the surrounding area. The philosophy behind paying respect and gratitude to the forest has also been enriched by the notion of sacredness. This sanctity has evolved in relation to three aspects. Firstly, it is related to revering the footprint. Secondly, it relates to offering gratitude to the territorial god, *Saman*, for safeguarding the sacred relic and sacred nature through its life supporting capacity. And, finally, it is related to the unfailing generosity the forest extends to the people in the adjacent terrain. The forest is also considered to be a resting place of gods and demons. This attitude has promoted non-exploitative and harmonious interactions: people refrain from removing large trees that they believe are inhabited by celestial beings or demons, and some of the trees are considered untouchable.

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

3.3.1. Rekindling the Interest in the “Sacred”

Ideas of the spiritual and sacred are not new within international conservation. As Jeanrenaud (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 early conservation efforts were undertaken “for the benefit of mankind”, as part of “the universal human heritage”, Sacred Natural Sites of indigenous and traditional peoples were either *overlooked* or *alienated* from indigenous peoples as they were assimilated into parks or even destroyed (Jeanrenaud 2001).

The current international policy discourse on protected areas and the programmatic themes of international organizations (with the notable exceptions of the World Heritage and the Biosphere Reserve Programs of UNESCO) pay scant attention to intangible¹⁰ and spiritual values.

Timely enough and thanks to ground breaking initiatives such as that promoted by the World Commission on Protected Areas (WCPA) *via* its Task Force on Cultural and Spiritual Values there is a growing appreciation within the international conservation movement of the need to *re-engage* with the sacred (Jeanrenaud 2001). This 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 a wide array of meaningful and, some intangible, ways (Jeanrenaud 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 protected areas intangible values (Box 24) 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).

¹⁰ As used here, the term “intangible values” refers to “that which enriches the intellectual, psychological, emotional, spiritual, cultural and/or creative aspects of human existence and well being” (WCPA 2000)

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

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

Spiritual Values – Those qualities of protected areas that inspire humans to relate with reverence to the sacredness of nature.

Cultural Values – The qualities, both positive and negative, ascribed to natural, cultural, and mixed sites by different social groups, traditions, beliefs, or value systems that fulfill humankind need to understand, and connect in meaningful ways, to the environment of its origin and the rest of nature.

Identity Values – Those natural sites that link people to their landscape through myth, legend or history.

Existence Values – The satisfaction, symbolic importance, and even willingness to pay, derived from knowing that outstanding natural and cultural landscapes have been protected and exist as physical and conceptual spaces where all forms of life and culture are valued and held as sacred.

Artistic Values – The qualities of nature that inspire human imagination in creative expression.

Aesthetic Values – Appreciation of the harmony, beauty, and profound meaning found in nature.

Educational Values – The qualities of nature that enlighten the careful observer with respect to human relationships with the natural environment, and by extension, people's relationships with one another, thereby creating respect and understanding.

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.

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.

Therapeutic Values – The relationship between people and natural environments in protected areas that creates the potential for healing and for enchanting physical and psychological well-being.

Source: A. Putney and D. Harmon in “The Full Value of Parks: from Economics to the Intangible”

3.4. Sacred Natural Sites: Finding the Right Policy Context

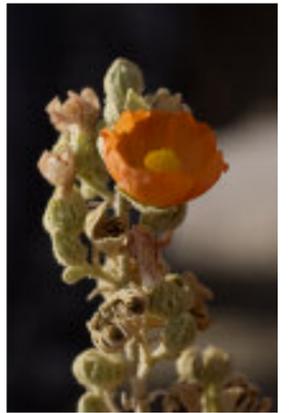
3.4.1. Protected Areas of Indigenous and Traditional Peoples: Readdressing the “Status Quo”

Indigenous and traditional peoples' Sacred Natural Sites fulfill similar functions as government declared protected areas. As stated above, due to the spiritual values attributed to these areas, 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. 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.

Besides, 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 formal protected areas. Traditional custodians and local communities 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 the 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 a Western one, anthropocentric, dualistic 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 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).



“If the sight of the blue skies
fills you with joy, if a blade
of grass springing up in the
fields has power to move
you, if the simple things of
nature have a message that
you understand, rejoice, for
your soul is alive”

Eleonora Duse

Box 25 Ambondrombe Sacred Mountain in Madagascar

“Try and penetrate with our limited means the secrets of nature and you will find that, behind all the discernible concatenations, there remains something subtle, intangible and inexplicable. Veneration for this force beyond anything that we can comprehend is my religion”

Albert Einstein

Ambondrombe is a sacred mountain for local people and a biodiversity hotspot for scientists: 15,000 ha of humid tropical forest shrouded in rare cloud forest cover its flanks between 500 meters and the peak, 1,936 meters above sea level. Several springs are also 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 interests from outside stakeholders. These people come in 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 emergence, increasing pressures on traditional cultural values and sustainable natural-resources use.

Source: Hanta Rabetaliana and Peter Schachenmann in “The Importance of Sacred Natural Sites for Biodiversity Conservation”

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. This has resulted in mistrust and animosity, which apart from ethical considerations, creates obstacles to effective management of such sites and areas (Oviedo, 2005).

This research project embraces a more ample, flexible and ambitious vision of protected areas that is to: (i) either incorporate spiritual and cultural attributes within several current management categories or (ii) consider Sacred Natural Sites as individual management categories in their own right. Both options should be considered since they could be instrumental in gaining the support of indigenous and traditional peoples when it comes to recognizing formal protected areas. It is in this discussion that IUCN protected areas categories 5 and 6 could provide a stepping stone by explicitly including Sacred Natural Sites in their definitions as a very initial step towards the recognition and acknowledgement of their very existence (Box 26).

In Mexico, there is a ground breaking and positive precedent in this direction, set by the state of San Luis Potosi Environmental Legislation back in 2001. It concerns Wirikuta, the Sacred Natural Site of the Huichol indigenous peoples in the Chihuahuan 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 (Huichol) and of their sacred sites as well as their historic-cultural

route to be located on the municipalities of Villa de Ramos, Charcas and Catorce”¹¹ (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 site¹².

The reserve was then created to and succeeded in safeguarding the integrity of the Huichol Sacred Natural Site. A number of key adjacent areas though, 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, when 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 in 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-decreed 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 designation¹³, 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.

3.4.2. International Policy Processes

In the last decade, several international policy processes and biodiversity conservation initiatives have promoted a new and promising way of understanding the role of indigenous and traditional culture and spirituality 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.

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

“At the deepest level of ecological awareness you are talking about spiritual awareness. Spiritual awareness is an understanding of being embedded in a larger whole, a cosmic whole, of belonging to the universe”

Fritjof Capra

¹¹ According to the Federal Environmental Law of Mexico – the so-called General Law for the Ecological Equilibrium and Environmental Protection (LGEEPA)- this designation belongs to the State Reserve category

¹² The petition to the State Government to protect the area came from the Huichol communal authorities

¹³ The definition of this category reads as follows: “Sacred Natural Sites are those natural areas which, in addition to their biodiversity importance, are sacred spaces for indigenous peoples and where ceremonies with a divine character are performed. In these sites reality is seen and perceived under a magic, spiritual and natural perspective and in those sites ritual offerings and ceremonies of the very same indigenous peoples do take place.” (San Luis Potosi Official Journal, June, 2001)

Box 26 IUCN Protected Areas Management Categories 5 and 6

	Category 5 Protected Landscape/ Seascape	Category 6 Managed Resource Protected Area
Objectives	<p>To bring benefits for the local community through the provision of natural products and services.</p> <p>To maintain the harmonious interaction of nature and culture and the continuation of traditional use.</p> <p>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.</p>	<p>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.</p>
Management	<p>By a public authority or a mosaic of private and public ownership operating a variety of management regimes.</p>	<p>Ownership may be by government, community, private individuals or a combination of these: management may be provided through local custom, supported and advised by governments and NGOs.</p>

Source: G. Oviedo and L. Maffi in “Indigenous and Traditional Peoples of the World and Ecoregional Conservation”



Photo: Johnson, R

“The clearest way into the Universe is through a forest wilderness”

John Muir

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 (xiii) 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 the 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.

3.4.3. UNESCO 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 *Seville Strategy for Biosphere Reserves*¹⁴, concluded 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 recommends at the national 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” (UNESCO 1996).

¹⁴ Resulting from an expert conference that took place in Seville, Spain in 1995

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

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 and traditional 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 insignificant or ever absent” (Schaff 2003).

As Schaff (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 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 who insisted that this reductionist view be expanded by renominating 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” (Schaff 2003).

3.4.4. 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:



Photo: Johnson, R

“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

3.4.4.1. Africa

In Guinea Bissau, Article 6 of the *Law of the Earth* (Official Journal n° 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 are traditional and historic lands. In addition, the *National Biodiversity Strategy and Action Plan (NBSAP)* aims to safeguard cultural and traditional practices compatible with the 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 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-Bijagós is an archipelago of 88 islands with a high diversity of ecosystems with rivers discharging nutrient-rich freshwater into the sea resulting in a very high productivity. This protected area was designated Biosphere Reserve in 1996 and amounts to a total of 101,230 has.

Certain areas of this 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 management practices of the *Bijagós* - limiting periodically the free access to certain areas and their natural resources - constitutes an efficient manner to devote certain areas for the preservation and reproduction of the site’s flora and fauna. An interesting overlap has been found between the reserve’s most valued biodiversity areas and these sacred sites. One can hence conclude that these *Bijagós* traditional management practices do make a valuable contribution towards the conservation of the area’s biodiversity.

Source: IUCN Guinea-Bissau “Conservation of Biodiversity Rich Sacred Natural Sites: a Medium-Sized GEF Proposal”

“I believe in God, only I
spell it Nature”

Frank Lloyd Wright

In Kenya, the *National Museums of Kenya* (NMKs) have the mandate to protect Sacred Natural Sites, a first step in this recognition being their declaration as “National Monument”. According to the law (the National Museums Act – Cap 216), the NMKs have “the power to preserve all the antiquities and monuments”. Cap 215 (the Antiquities and Monuments Act) also gives the NMKs power “to preserve objects of archaeological, paleontological of historic interest” although its enforcement has proven to be difficult and it does not acknowledge the protection of biological heritage (Box 28).

Box 28 Taita sacred forests in Kenya

The Taita-Taveta district is one of the six districts of the Coastal Province of Kenya. The district starts from the foothills of Mt. Kilimanjaro, Africa’s highest mountain (5,895 meters) and extends eastwards to within 80 km of the Indian Ocean coastline. The district is predominantly a dry lowland averaging about 500 m above sea level but punctuated by a few high mountains: the plains are ideal for wildlife and harbour a huge concentration of wildlife and thus much of it is part of Tsavo National Park, the largest in the country.

The indigenous forests are part of what is referred to as the Eastern Arc, one of the world’s biodiversity hot-spots. Several hundred more forest patches are found in the inhabited areas: these are relics of a unique *Taita* community practice 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 eventual destruction of the sites are however on the increase. Due to their small, size the forests are of little economic return and this has contributed to them receiving little attention both at the national and local institutional 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”

3.4.4.2. Latin America

It was in 2001 that Ecuador developed its *National Biodiversity Policy and Strategy Plan (NBPS 2001- 2010)*. The NBSP has a provision on the role of indigenous and traditional 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).

Box 29

The Cayambe area is located on the Eastern Range of the Ecuadorean 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 a 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*.

IUCN SUR office in “Conservation of Biodiversity Rich Sacred Natural Sites: a Medium-Sized GEF Proposal”

In Peru, the 1990s were crucial for the development of National Protected Areas (NPAs) blueprints. The Rio Biodiversity Convention was ratified by the Peruvian State in 1993: the same year, the national constitution sanctioned NPAs (article 68) and, in 1997, Law 26834, the “*Protected Areas Law*” was passed.

The adoption of the 169-ILO Convention in 1994 did constitute a further step declaring, by Supreme Decree 038-2001-AG that: “social, cultural, religious, spiritual, economic values of peasants’ and natives’ communities are recognized, protected and promoted, as established by Convention 169 of Indigenous and Tribal Peoples in Independent Countries of the International Labor Organization, ILO, particularly following Part IX and in harmony with Protected Areas’ objectives of creation” (Article 9).

In addition, the Andean Community-Conservation Areas (ACCAs) are community protected areas anchored in community-based landscape management, integrating traditional models with modern ones though they are not formally part of the National Protected Areas system.

3.4.4.3. Asia

The *National Biodiversity Strategy and Action Plan (NBSAP)* of India covers the cultural and spiritual context associated with natural resources. In addition, legal spaces for the 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 follo-

“I believe in the cosmos. All
of us are linked to the
cosmos. Look at the sun; if
there is no sun, then we can
not exist. So nature is my
god. To me, nature is sacred;
trees are my temples and
forests are my cathedrals”

Mikhail Gorbachev



wing 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, 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 and destructive changes in land use while contributing to the building of institutional structures at the community level.

3.5. Sacred Natural Sites: the Challenges Ahead

3.5.1. Legally Established Protected Areas

As stated earlier, this research project encourages for those Sacred Natural Sites outside protected areas to be meaningfully integrated into existing protected area networks to enhance their protected status while maintaining the traditional belief systems, the cultural heritage and the integrity of indigenous and traditional communities. For those Sacred Natural Sites already within protected areas boundaries their cultural and spiritual traits need to be fully integrated into the management plans of such areas. This scenario needs to be considered always and only when so desired by the sites rightful custodians.

3.5.2. Lack of the Appropriate Laws and Policies

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, the 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 dimensions of conservation for indigenous and traditional 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 party countries to the issue, and to devise appropriate tools to address it. At the national level, some protected area’s laws that have been updated in the last few years – as discussed above - do address this issue but again, as the general rule, 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.

3.5.3. Low Public Awareness and Support

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 and conservation agencies, international conventions, legislation and the wider civil society, unfortunately. 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 institutional partnerships in support of the initiative.

3.5.4. Marginalization and Vulnerability Issues

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).

*“The Huichol Indians are praying, making offering of animals to their gods. Their incantations are *keeping the world in balance”*

Dr. Claude Martin

3.5.5. Human Rights Issues

Conservation groups and other key stakeholders 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).

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 WWF when working with indigenous and traditional peoples.

Ever since, the work of conservation organizations like IUCN has shown that the lack of recognition of indigenous and traditional peoples' rights results in 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 (2000) 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." When it comes to Sacred Natural Sites management there is an evident need to combat discrimination against the indigenous spiritual and religious practices associated to these sites.

For example, in the Mesoamerican region, indigenous groups have been historically dominated by the "mestizo" population and the ruling class being 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 domination until recently aggressive policies for the "extirpation 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 in the region.

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 Mayagna Awas Tingni 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" (Inter-American Court of Human Rights, 2001).

3.5.6. Capacity Building

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, there is 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.

3.5.7. Lack of Information

Globally, and judging from existing reports, Sacred Natural Sites must amount to several hundred thousands in the world and, 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 being thorough; 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 rich Sacred Natural Sites.

"Every natural object is a conductor of divinity. Standing alone on a mountain top, it is easy to realize that whatever special nests we make – leaves and moss like the marmots and birds, or tents of piled stone – we all dwell in a house of one room..."

John Muir

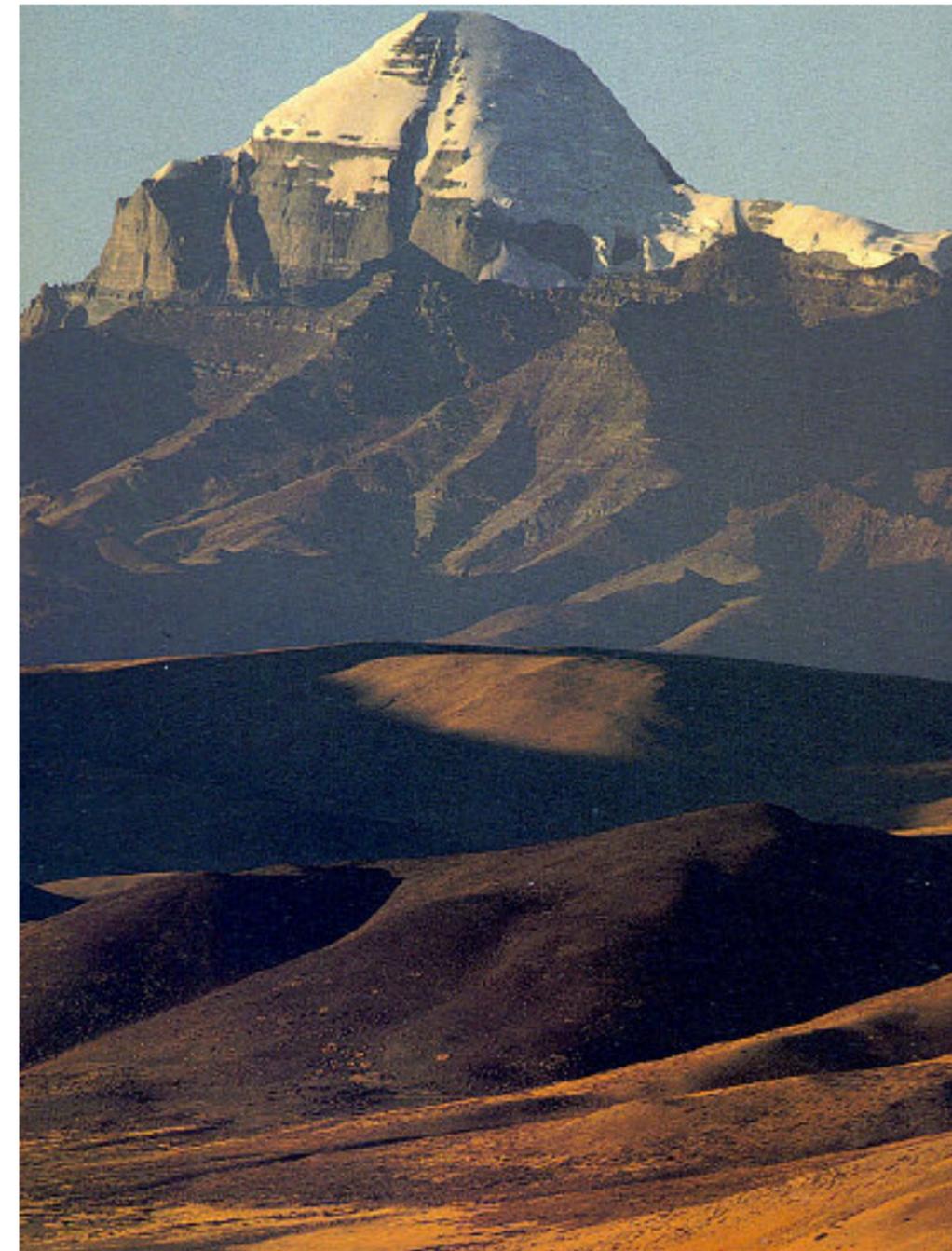


Photo: Johnson, R

3.5.8. 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.



“Nature is a unity in
diversity...a harmony,
blending together all created
things...one great whole
animated by the breath
of life”

Alexander von Humboldt

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:

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.

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.

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.

Building up on the body of information and knowledge: as the basis for action to increase 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 free, prior informed consent. And it is in this crucial point that this research paper intends to offer a methodological approach and tools to increase the current body of information and knowledge on Sacred Natural Sites.

Summary of Recurrent Characteristics of Sacred Natural Sites of Indigenous and Traditional Peoples

- Sense of sacredness, awe, secrecy, worshipping, benevolence and respect associated with sacred entity. Identifiable spiritual/cultural authority in charge.
- Currently “under ritualistic use” versus those archaeological sites which may be sacred though no longer in active use by a community.
- Limited access and restricted use usually linked to taboo and prohibitions related to resident deity/creational myth.
- Occasional and sustainable contributions to local livelihoods guided by TEK practices.
- Can be the object of worship for various ethnic groups.
- Variable size.
- Some destroyed or/and under peril by institutionalized religions (*sauf* some Eastern traditions).
- In most cases, conflictive relationships with traditionally established Protected Areas Systems.
- Variable land tenure.
- Rich cultural, ethnic and linguistic diversity.
- High degree of acceptance and respect from communities: deeply embedded in traditional belief systems.
- Some in search for appropriate legal protection.
- An anchor for cultural identity and social cohesiveness.
- Important value for biodiversity conservation, for example:
 - as areas of high biological diversity;
 - as sanctuaries for rare or threatened species some of them considered to be sacred;
 - gene pools;
 - as vegetation islands;
 - as sites that protect freshwater sources;
 - as indicator sites showing potential natural vegetation in areas subject to environmental degradation (important for the restoration and rehabilitation of degraded ecosystems).

Adopted and adapted from: S. Jeanrenaud (2001), T. Schaff (2003) and, G. Oviedo and L. Maffi (2000)



CHAPTER III: Research Context

1. Why Mexico?

1.1. Biological and Cultural Diversity

It is in this 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 among those nations examining the possibility of incorporating provisions for the protection of Sacred Natural Sites in their national environmental laws and policies.

“Man can no longer live his life for himself alone. We realize that all life is valuable and that we are united to all this life. From this knowledge comes our spiritual relationship with the universe”

Albert Schweitzer

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 harbors at least 62 different indigenous peoples¹⁵, is home to America’s largest population of indigenous communities (Toledo 2003) or, using ethnolinguistic criteria, around 230 endemic indigenous languages¹⁶.

According to Toledo (2003) there are 26 identifiable indigenous regions in Mexico, most of them in the center and south occupying every major natural environment found in the country. 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 (Toledo 2003).

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

¹⁵ Mexico, Comisión Nacional para el Desarrollo de los Pueblos Indígenas. 2001. “Programa Nacional para el Desarrollo de los Pueblos Indígenas 2001-2006”. Mexico D.F.

¹⁶ Gordon, Raymond G., Jr. (ed.). 2005. Ethnologue: Languages of the World. Fifteenth edition. Dallas, Tex.: SIL International.



Photo: Carl Lumholtz (American Museum of Natural History)

Mexican conservationists are increasingly aware of the validity of using a bio-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, regional 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 “peripheral factor” to be dealt with rather than being a main axis permeating the management plan goals.¹⁷

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 the need of “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”.¹⁸

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.

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 (Toledo 2003): that makes of Mexico the world’s most important laboratory in experimental communal forestry management and potentially, in Sacred Natural Sites conservation and management. In addition, the country’s principal biological and genetic deposits are in the hands of indigenous 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 (germoplasm). 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).

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 of Protected Areas (CONANP), dependent on the Ministry of Natural Resources (SEMARNAT), is slowly but surely 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.

“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 remains what it is as a part of the natural order, but at the same time, 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

¹⁷ As one of the few exceptions, the Pinacate and Great Desert of Altar Biosphere Reserve contemplates in its management plan the Papago indigenous group sacred sites.

¹⁸ Mexico’s NBSAP

CHAPTER IV: Developing a Methodology and Tools

“The forest is not merely an expression or representation of sacredness, nor a place to invoke the sacred; the forest is sacredness itself. Nature is not merely created by God, nature is God. Whoever moves within the forest can partake directly of sacredness, experience sacredness with his entire body, breath sacredness and contain it within himself, drink the sacred water as a living communion, bury his feet in sacredness, open his eyes and witness the burning beauty of sacredness”

Richard Nelson

1. 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, pressing threats, etc. It is also presumed that many formal protected areas in Mexico include Sacred Natural 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 they 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.

Among 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 free, prior and 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.

2. Benefits of this Research Project

Being the first systematic approach at a national scale to develop, test and implement a methodology and tools for inventorying Sacred Natural Sites based on an ecosystem and habitat types approach, this research 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 Mexican indigenous and local communities of the country with key information that will allow them to devise better strategies and tools to protect their Sacred Natural 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 among the stakeholders relevant to their conservation and the

general public; (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 the opportunity to link the information collected to worldwide databases aiming at similar objectives of protecting Sacred Natural Sites (i.e. WCMC), based on the communities’ voluntary disclosure of information.

3. Proposed Framework for Developing a Methodology and Tools

The proposed framework for implementing the methodology and tools is divided into 5 distinct steps:

- Initial evaluation leading to a situational analysis.
- Potential Sacred Natural Sites (SNS) distribution areas resulting from applying different criteria based on a GIS-based approach.
- Field prospecting and eventual inventorying of those Sacred Natural Sites identified.
- Information compilation.
- Final results’ dissemination.

In each of these phases the methodological steps and tools to be used are identified and explained, together with the participating key stakeholders. 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 (Box 30).

Box 30 Proposed Implementation Framework of a Methodology an Tools for Inventorying Sacred Natural Sites							
Methodological Steps Proposed	1.- Evaluation Phase		2. – Potential SNS Distribution sites/areas Phase		3.- Prospecting and Inventorying Phase	4.- Information Compilation Phase	5.- Results’ Dissemination Phase
			Coarse Filter Criteria	Fine Filter Criteria			
Tools to be Used	- Bibliographical review - Key stakeholders questionnaires - Open-ended interviewing - Development of Research Protocol		GIS mapping	GIS mapping	- Registration Template - MoU Template - FPIC Template	- Excel Database	- Guidelines on how to apply the methodology - Webpage - Publications - Bulletins - Magazines
Key Stakeholders Involved	Conservation Government Indigenous Cultural Research Academic	Representatives	Conservation Actors GIS Specialists Researcher(s)	Conservation Actors GIS Specialists Researcher(s)	Indigenous and Traditional Rightful Representatives Researcher(s) Government Authorities	- Researcher(s) and associated institution(s) - Data base expert - Ind and trad rightful reps - Government Reps	Various venues at the national, regional and international levels
Duration	3 months		3 months		12 months	2 months	6 months plus long term dissemination activities
Benchmarks	- Questionnaires completed and evaluated - Protocol developed and ready for implementation		- Thematic GIS maps produced and final map detailing potential distribution of SNS resulting from applying coarse and fine filters		- SNS information captured - MoU accorded upon and implemented - FPIC accorded upon and implemented - Community rightful reps. participating in project	Database on registered SNS	Dissemination tools implemented

4. Implementation of the Framework

4.1. Step 1: Evaluation Phase

4.1.1. Methodology

This phase is crucial for determining the overall *status quo* of the object of the research, in this case, Sacred Natural Sites.

4.1.1.1. Bibliographical Review and Open-Ended Interviewing

A careful review of all available bibliography is a must especially in a relatively new research subject such is the case of Sacred Natural Sites, an appraisal that shows, among other things, that there is not a widely accepted and consented upon definition of the term *per se*.

In this phase useful information was generated by conducting individual interviews to all those key stakeholders identified as relevant for determining Sacred Natural Sites *status quo*: these interviews were conducted by using *ad hoc* questionnaires for each of the individuals interviewed.

The interviewing process intended to explore and cover key stakeholders' knowledge, feelings, attitudes, opinions, past experiences and expectations *vis a vis* the inventorying and conservation of Sacred Natural Sites in a national context. The results did vary depending on the interest of the individual interviewed and the priority he/she assigned to the subject discussed, as it will be seen later in the collected questionnaires shown in the Annexes section.

The chosen methodology for conducting these personal interviews was that of "open ended" interviewing due to the special nature and sensitivity elicited by Sacred Natural Sites. Hence, the interviews conducted were based on a sequence of questions organized by thematic sections trying to elicit a more elaborated response than a plain "yes" or "no" statement.

Identifying the proper stakeholders was a crucial element of open-ended interviewing. The sampling of respondents for open-ended interviews is to be based on judgmental (purposeful) criteria rather than random chance. Key informants will be selected because of their special knowledge about the topic: other respondents are to be selected for their representative status as members of different representative groups, or on the basis of any special social status accorded to them, either formally or informally.

"The earth, its life I am,
The earth, its feet are my
feet, The earth, its legs are
my legs, The earth, its body
is my body, The earth, its
thoughts are my thoughts,
The earth, it's speech is my
speech"

Navajo Chant



Stakeholders selected for Sacred Natural Sites open-ended interviewing

Governmental authorities: protected areas and cultural/indigenous 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 a vis* the management of natural and cultural resources at the national level.

National conservation organizations representatives: leading conservation organizations in the country 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 and/or commitment in local institutions.

Academic representatives: who might have conducted or are interested in engaging in research on bio-cultural conservation.

Indigenous and traditional peoples organizations representatives: with a first hand knowledge of the 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 stakeholders 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 individual(s) to consult and work with as Sacred Natural Sites informants.

"I believe a leaf of grass
is no less than the
journey-work of the stars"

Walt Whitman

4.1.2. Tools

4.1.2.1. 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.

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. It is disappointing to say that most of the interviewees did not show much interest in the subject and this is well reflected in the way they responded to the questions formulated, by a simple "yes" or "no" in questions that did invite a further reflection and discussion on the matter: a minority though did share his/her experiences and reflections.

Sample Questionnaire for Protected Area Authorities

Basic Information

Name of the agency:
Name and position of individual answering the questionnaire:
Date of the interview:
Location:
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, to your knowledge, 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 a management category?

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/division?
Could it be detrimental in any way? If the answer is yes, Why?
Has your agency conducted a research exercise of this nature?

Capacity Building

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

Documentation

Is there any written information available on your organization's 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!

4.1.2.2. Research Protocol



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 has faced and taken into account the wide diversity of situations – cultural, social, political, economic and geographic – in which indigenous and traditional peoples live thus concluding that the development of a draft protocol requires a flexible, adaptive and sensitive approach when trying to come up with a set of recommendations that are to be universally applicable. Hence it is highly recommended that researchers find out about the details of local protocols from a range of sources, including individuals and local and regional community organizations. Additionally, it is a fact that protocols are dynamic and evolve over time in response to internal and external factors. It is important for researchers then to be sensitive to, and accommodating of, such changes by building long term, ongoing relationships with the indigenous and traditional communities. Last, but not least, some communities may have already developed protocols they wish researchers to follow, in these cases, these local documents should and will be more relevant.

“The highest human purpose is always to reinvent and celebrate the sacred”

N. Scott Momaday

The protocol (Box 31) that follows is intended for implementation in the context of a bio-cultural research project, in this case, the inventorying of Sacred Natural Sites. In the light of the diverse circumstances encountered, 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 (1996).” These are: (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 invariable 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 may seem 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 **must** 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 the research would take place, as well as the inventorying methodology and tools to be used;
- 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;
- must** 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;
- must** 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 communities 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 a Free, Prior and Informed Consent (FPIC) 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;
- should** help set up a system of registration of innovations / practices so that Intellectual Property Rights of local communities or innovators are not compromised;
- should** set up rules of good conduct and practice by researchers;
- should** recognize, support and reward ethical practices in research;
- should** set up eco-ethno-ethics committees to protect the rights of researchers, communities and individuals contributing to the conservation of natural and cultural associated manifestations.

6) Culturally restricted information or objects

The researcher must insert this clause given the sensitive nature of the information collected when working in Sacred Natural Sites inventorying and general conservation:

“I agree that, when [the researcher(s)] have collected all the information or things they may need for the inventorying process, they will talk to me [and/or whoever else has the authority to discuss them] about how to manage and what to do with any secret or sacred information or things encountered during the research process”

Adopted and adapted from: “Biodiversity Research Protocols” in “Proposed Guidelines for Researchers and Local Communities Interested in Accessing, Exploring and Studying Biodiversity”

“Despite great diversity, there is a shared worldview and ethics in both supernaturalistic and naturalistic forms of contemporary nature-oriented spirituality. The common perception can be stated succinctly: The earth and all its life forms and processes are sacred. We belong to them and they are us –we are kin. We should, therefore, act lovingly, reverently, and respectfully toward them. We must not unnecessarily injure these beings and processes when we take from them what we need to live. The key to contemporary earth-based spirituality and ethics is, therefore, a felt sense of “connection”, kinship, and loyalty to earth, her life forms, and living systems”

Bron Taylor

4.1.2.3. Protocol 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 the working relationships. Respect, honesty, rapport, and careful listening to what the community has to say are important bases of any formal written agreement (Proposed Guidelines for Researchers and Local Communities Interested in Accessing, Exploring and Studying Biodiversity, 1996).

Formal written agreements are to be used later on the methodology proposed, concretely during the prospecting and inventorying phase and can be in the form of a: (i) Regular Contract Agreement; (ii) Memorandum of Understanding (MoU); and (iii) Free, Prior and Informed Consent (FPIC) agreement.

4.1.2.4. (i) Stakeholders Involved: conservation and cultural government authorities, national conservation organizations, indigenous and traditional peoples’ representatives and the academia.

(ii) Timeframe Suggested: an exhaustive and thorough evaluation phase should take at least 3 months to proceed with the biographical review, identification of stakeholders, questionnaires development, interviewing agenda, results compilation and analysis and protocol development.

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

4.2. Step 2: Sacred Natural Sites Potential Distribution Phase

4.2.1. Methodology

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

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. Hence, as previously accorded upon, the definition of Sacred Natural Site is “to include those Sacred Entities - Spatially Disperse and Definable Sacred Landscapes, Sacred Natural Physiographical Features and Sacred Floral and Faunal Species’ communities - that are venerated and held in awe while acting as a linkage between nature and culture/spirituality for the communities involved.”

This established, the next step was to proceed with the application of a “coarse filter” that includes two of the main criteria that were used as working assumptions, that is, this research is to focus on Sacred Natural Sites of indigenous and traditional peoples with both rich cultural/spiritual and biodiversity traits.

4.2.1.1. Coarse Filter

Areas with rich biodiversity: for this indicator, the Terrestrial and Hydrological Priority Regions established by the National Commission for Knowledge and Use of Biodiversity (CONABIO) were used. These “priority” regions were determined 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 and priority conservation value in Mexico.

Indigenous and traditional regions of Mexico: for this indicator, the regions with an indigenous and traditional presence plus a high cultural and linguistic diversity were used. These regions are based on the concept of “traditional space”, a geographical nucleus occupied historically by indigenous and traditional groups before and after the Spanish conquest that show similar linguistic and cultural expressions, cosmovision, as well as physical and natural traits, altitude, and climate conditions.

In order to come up with the indigenous and traditional regions used for this analysis, three different information sources were used, combined and added up: 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 a fraction of these areas representing 77% of the indigenous and traditional regions of Mexico (around 8 million people).

A second source used, filling in the information gaps of the CDI, was that presented by Toledo (2003) in the publication “Mexico’s Living Nature” resulting in a more comprehensive and complete representation of the indigenous and traditional regions.

Figure 2 Step 2.- Sacred Natural Sites Potential Distribution Analysis Phase

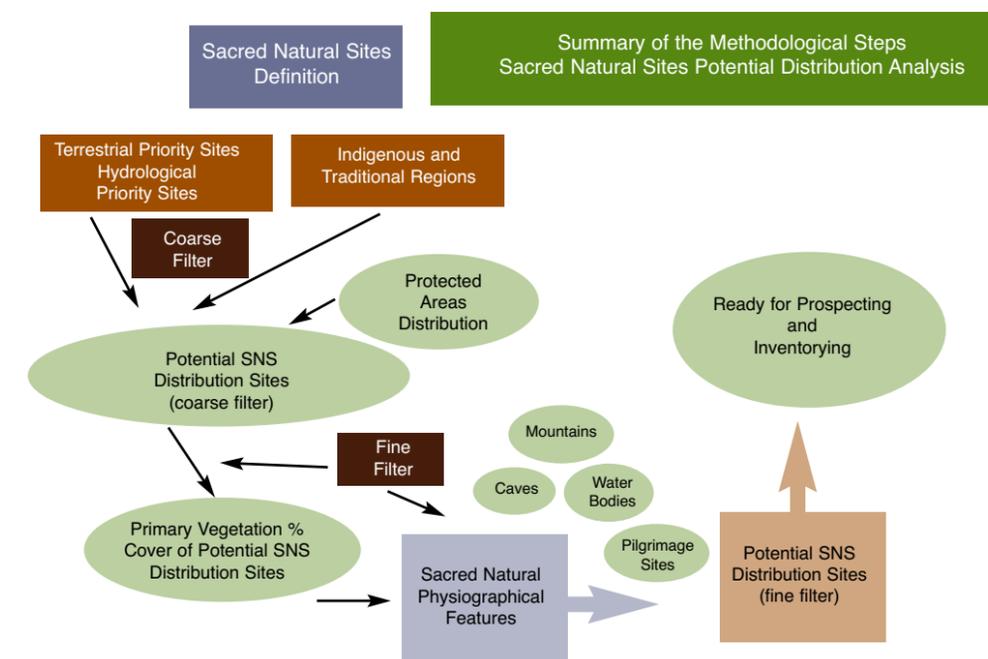


Figure 2: Overall diagram depicting the methodological steps followed in the SNS Potential Distribution Analysis Phase.

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

“The world is a sacred place and a sacred process...and we are part of it”

Daniel Quinn

At last, the field research conducted by the research author 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 cyclic destinations of their pilgrimage cycles.

Results from the application of the “coarse filter”: The overlap of the terrestrial and hydrological priority areas together with the indigenous and traditional regions results in a preliminary map highlighting the areas for a potential distribution of Sacred Natural Sites (SNS) (Map 1).

Formally established Protected Areas

The results generated by the coarse filter, when overlapped with the country’s formal network of federal and state protected areas, show that there is a significant coincidence between these areas and those lands with an indigenous and traditional presence (Map 2).

4.2.1.2. Fine Filter

A second “fine filter” needs to be run to further delimit the potential distribution of Sacred Natural Sites. The criteria used for this step were those already established in the working assumptions: (a) Sacred Natural Sites (SNS) generally harbor rich biodiversity in an optimal conservation state; and (b) this analysis is to follow the accorded upon spatial classification of sacred entities.

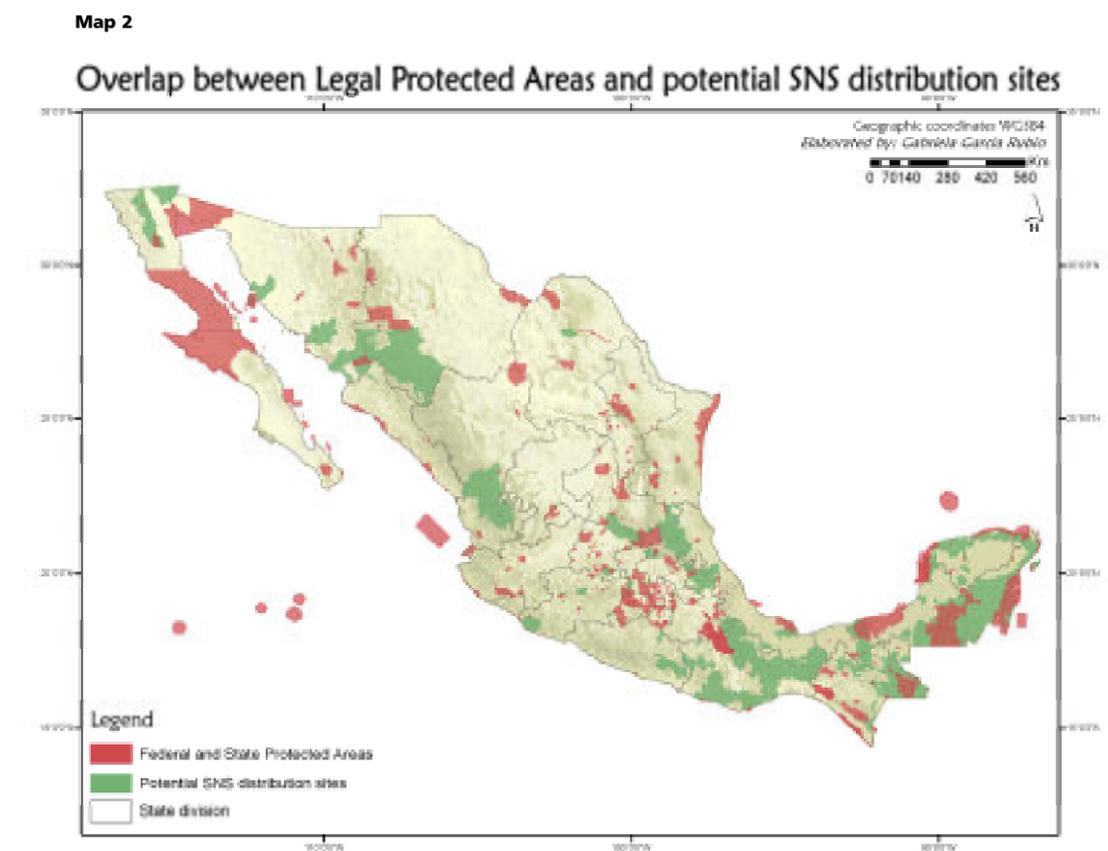
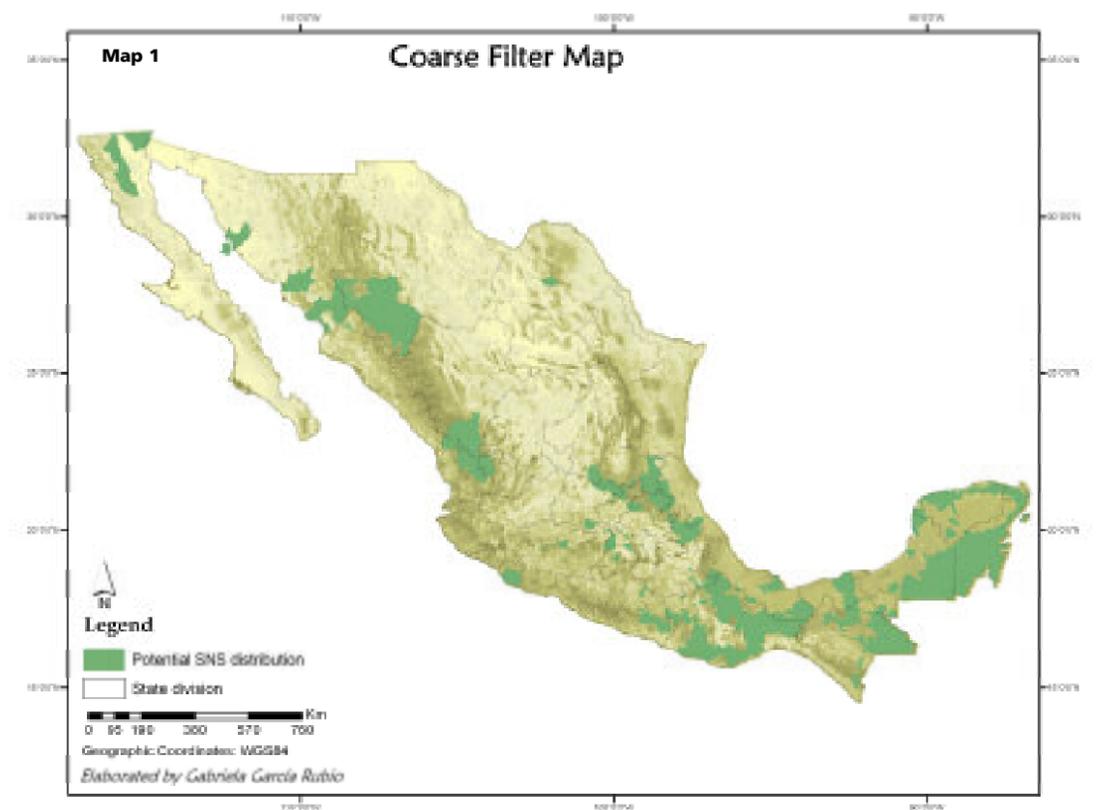
The degree of conservation of the potential SNS distribution areas was determined by using percentages of primary vegetation occurrence as an indicator of the sites conservation status, the smaller percentages denoting a disturbed/highly disturbed environment while the higher values (above the 34% mark) are to be associated with areas in a conserved/highly conserved state.

“We are surrounded by a rich and fertile mystery”

Henry David Thoreau

Hence, the areas with the higher percentages of primary vegetation are presumed most likely to contain SNS and in a conserved/highly conserved state. If any potential SNS distribution areas were to be found under this reference value, they are supposed to harbor a disturbed or highly disturbed environment. It is important to remember though that it is precisely within these highly degraded environments that relict SNS, not necessarily very large in size, can be found. Given their potential to serve as genetic reservoirs and regeneration sites, 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 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



18 This category of a sacred entity is, since its mere presence, associated and/or contained within Spatially Disperse and/or Definable Sacred Landscapes

It is highly probable that conducting this exercise in other countries may allow and call for employing higher percentages of primary vegetation to determine the existence and conservation status of areas containing SNS. In the Mexican case though, applying values higher than the 34% mark would have reduced the SNS potential distribution area to a very limited number of sites as it can be appreciated in the map below (Map 3).

Next, Sacred Natural Physiographical Features¹⁸ venerated by the local indigenous and traditional communities are to be identified within the potential SNS distribution areas. Given the Mexican cultural context, and after an analysis of the sacred natural 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 areas. The features selected were those of: mountains, water bodies and caves. It is highly recommended though that researchers determine which dominant and characteristic set of natural physiographical features apply in their respective national, cultural, and natural contexts.

Mountains: they are to be higher than 2,500 meters since both the literature reviewed and field experience show that it is the higher mountains that usually elicit a general reverence. Together with the altitude factor, those mountains displaying distinct features such as geometrical and humanoid forms, colored strata, etc. are to be singled out as likely and potential sacred entities.

Water bodies: the literature shows that in the dry environments to be found in the Northwestern and Northeastern regions of Mexico, most water bodies (from creeks and ponds through oasis) are sacred entities revered by the local communities.

Caves: they play a key role in the spirituality of Mesoamerican indigenous and traditional groups. Since the information detailing the distribution of caves, caverns, cavities, subterranean features etc. at the national level has not been compiled yet, these sacred entities are to be associated with the distribution of karstic strata, an ideal indicator of the conformation of these geological features.

Sacred floral and faunal species: it would be highly recommendable to identify the Sacred Floral and Faunal Species’ spatial distribution to identify the sacred entities associated with them. In

Mexico there are several endemic species that have been conferred a sacred status and that are to be included in this analysis.

At last, the author’s field experiences highly recommends the inclusion of **indigenous and traditional pilgrimage routes and destinations** since they usually unify distant Spatially Disperse and Definable Sacred Landscapes and are dotted with many Sacred Natural Physiographical Features along their way.

The final SNS potential distribution areas map - resulting from applying the above described criteria - is included below and is to be used as the basic starting point to conduct the Prospecting and Inventorying Phase (Map 4).

4.2.2. Tools: Geographic Information System (GIS) databases and resulting maps.

4.2.3. (i) Stakeholders: researcher(s), GIS experts and conservation actors.

(ii) Timeframe suggested: 3 months.

(iii) Benchmarks: database and thematic GIS maps produced: final map detailing potential distribution of SNS resulting from applying coarse and fine filters is to be used in the Prospecting and Inventorying Phase.

4.3. Step 3: Prospecting and Inventorying Phase

4.3.1. Methodology

The researcher is now ready for the in depth prospecting of the potential Sacred Natural Sites distribution areas that is: (i) to locate these sites on the ground and (ii) conduct their eventual inventorying.

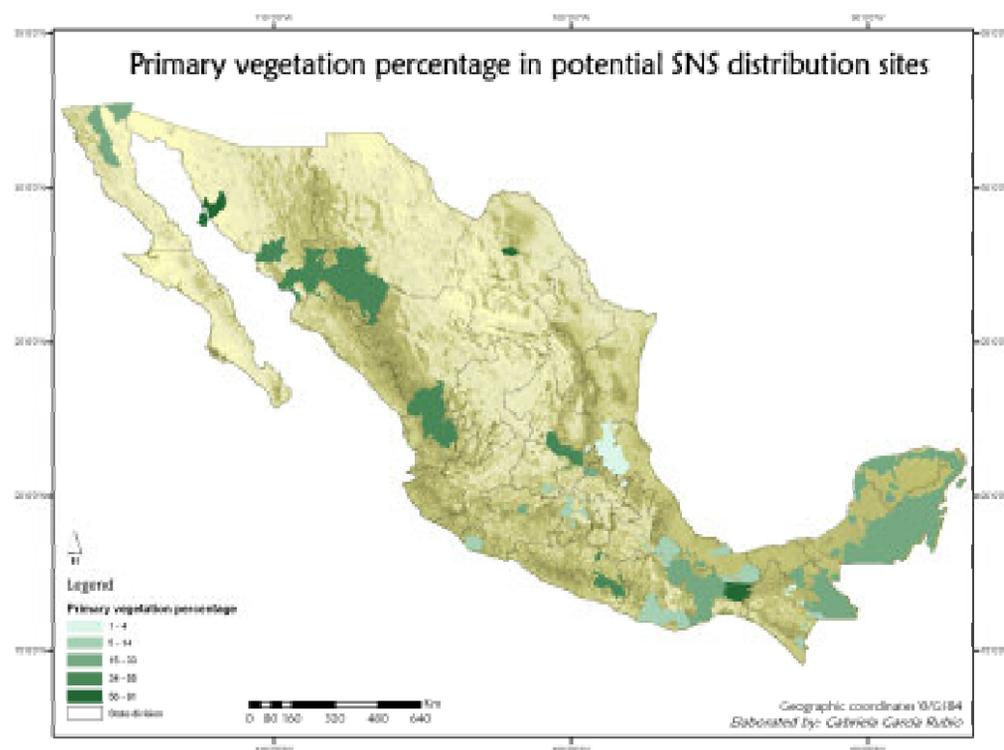
“Nature is an infinite sphere of which the center is everywhere and the circumference nowhere”

Pascal

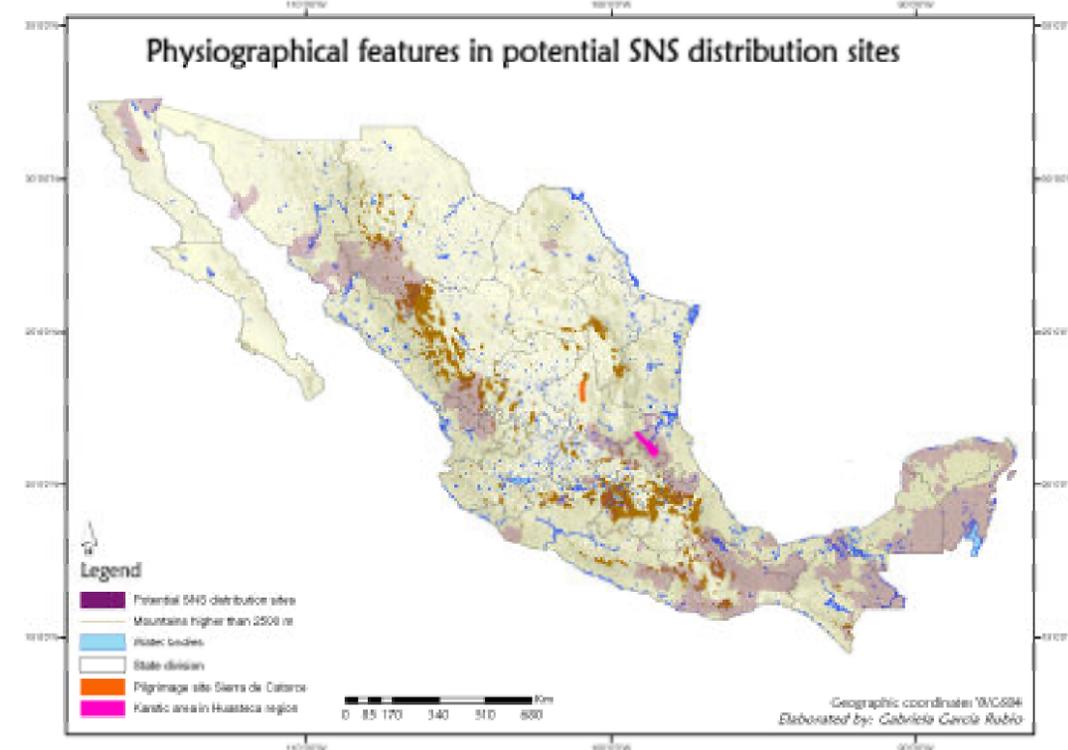
“Green is the prime color of the world and that from which its loveliness arises”

Pedro Calderon de la Barca

Map 3



Map 4





“The natural world is subject as well as object. The natural world is the maternal source of our being as earthlings and life-giving nourishment of our physical, emotional, aesthetic, moral and religious existence. The natural world is the larger sacred community to which we belong. To be alienated from this community is to become destitute of all that makes us human. To damage this community is to diminish our own existence”

Thomas Berry

The Prospecting Phase recommends field trips to each one of the potential sites in order to determine the areas’ real feasibility in terms of: (i) information available (confirming the bio-cultural richness of the sites proposed); and (ii) on the ground cooperation to move on to the next steps for the inventorying process. In this phase, the researcher has the opportunity to get to know not only the candidate sites in a first hand observation process, but also the indigenous and traditional peoples and their organizations. This Phase is a key opportunity for building local trust on the project by establishing from the offset a healthy relationship with the indigenous and traditional communities.

The main steps of this Phase include:

- 4.3.1.1. Prospecting in the Field.
- 4.3.1.2. Vision and Common Goals Assessment.
- 4.3.1.3. Socio-Cultural Assessment.
- 4.3.1.4. Inventorying Strategy Development.
- 4.3.1.5. Inventorying Implementation.
- 4.3.1.6. Joint Monitoring & Evaluation System Implementation.

4.3.1.1. Prospecting in the Field

It is recommended to:

- Identify indigenous and traditional peoples, their communities, organizations and regional associations and their rightful representative bodies in the prospecting areas.
- Work hard on establishing credibility and transparency from the outset.
- Conduct an *in situ* evaluation of biodiversity richness and state of conservation of potential sites.
- Conduct an *in situ* evaluation of spiritual connections and rituals of candidate sites.
- Take the 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).

Tool Required:

Any initial accords in between the researcher and the communities should be formalized *via* a Memorandum of Understanding (MoU) to clarify and formalize the working relationship. Why is this important? MoUs promote cooperation, collaboration, effective communication and reciprocal facilitation between the indigenous and traditional peoples and the researcher. They build on the existing strengths and collaborative activities of the two sides involved, outline areas of potential collaboration and cooperation and establish a framework for that collaboration. MoUs, while not creating binding or legal obligations on either party involved, provide the basis of their relationships and are a public agreement of the collaborative arrangements which they have, and intend to have, with each other.

Generally, the specific details of each project or activity arising out of a MoU will be the subject of a separate agreement between the two parties involved as appropriate (See Annex 6 for sample template). A MoU or similar agreement for collaboration should include:

Proposed General Outline for MoUs

- A brief historic summary of any previous collaboration between the parties involved.
- A brief description of the communities and areas concerned.
- Issues of mutual concern to be explored though also highlighting the benefits of the partnership.
- Provisions on sound research practices concerning indigenous and traditional peoples and their territory.
- A statement of intent to collaborate outlining the next steps in building the partnership.
- An outline of the research project planning schedule with a list of benchmarks; this will indicate the progress made to the concerned parties, the stage reached in the process, and the collaborative actions required.

Source: G. Oviedo and L. Maffi in “Indigenous and Traditional Peoples of the World and Ecoregional Conservation”

4.3.1.2. Vision and Common Goals Assessment

The following components are crucial:

- Once the Sacred Natural Site(s) location has been revealed by the community, the researcher should engage indigenous and traditional peoples’ rightful representatives in the inventory implementation strategy assessment. It is also advisable to use this step to further develop an understanding of the role played by the local communities in managing and keeping the integrity of their Sacred Natural Site(s).
- Jointly create a vision for the inventorying implementation integrating and explaining to the community the research working premises while including local values and perceptions, political issues, conservation agendas and Ecological Traditional Knowledge (TEK) issues.
- Identify and assess the major threats to the Sacred Natural Site(s) conservation in conversations and meetings with the rightful representative bodies (i.e. Council of Elders).

4.3.1.3. Socio-Cultural Assessment

It is recommended to:

- Conduct a participatory situational analysis and needs assessment with rightful representative bodies of indigenous and traditional peoples: the drafting of a Free, Prior and Informed Consent agreement should be suggested at this point.
- Proceed to the drafting and approval of the inventorying proposed Registration Template that is to capture the most relevant information on the Sacred Natural Site(s) identified.
- Identify indigenous and traditional communities key concerns *vis a vis* the *status quo* of their Sacred Natural Sites as well as other spiritual/cultural issues (TEK, land tenure rights, human right issues, most pressing threats, bioprospecting issues, security issues, etc.).

“I am not an atheist but an earthiest. Be true to the earth. (Americans are) increasingly pagan and hedonistic people (thank God!)...we are learning finally that the forests and mountains and desert canyons are holier than our churches. Therefore let us behave accordingly”

Edward Abbey

- Identify and develop an understanding with traditional management bodies such as the Councils of Elders about 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 neighboring communities and any other relevant stakeholders.
- Identify current participation of indigenous and traditional communities in existing government institutions and mechanisms.

Tool Required:

The Registration Template is a key tool for this step. After an extensive bibliographic research and in accordance to the working premises set up in this research project, the template shown in the next page is proposed:

4.3.1.4. Inventorying Strategy Development

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 interfere 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, Prior and Informed Consent (FPIC) agreement.

Tool Required:

To ensure a broad acceptance and commitment to the Sacred Natural Sites inventorying strategy a Free, Prior and Informed Consent (FPIC) agreement must be accorded upon and signed by all parties involved.

The international law basis for the principle of Free, Prior and Informed Consent can be found in a legal commentary prepared for the Working Group on Indigenous Populations²⁰. 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 (See Annex 7 for sample format). The main objective is to ensure that anyone who participates in a given research project is informed about:

- how you propose to conduct the research.
- what you are asking the participants 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.
- how to record the indigenous and traditional communities involved consent to all of the above before participating in the inventorying process.

“Everything in nature contains all the power of nature. Everything is made of one hidden stuff”

Ralph Waldo Emerson

²⁰ This commentary is available at: http://www.un.org/esa/socdev/unpfii/documents/FPIC_2005_Com%20on%20Human%20Rights.pdf

Sacred Natural Sites Proposed Registration Template

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

Name:
Origin and significance, spiritual and cultural context:
Indigenous and/or traditional groups involved:

2. Location and size

Geographic location (country, province/state/department/latitude/longitude):
Extension in Hectares :
Spatial classification of sacred entity:

3. Protection status

If within the limits of a protected area, specify which:
Current authority (government, community, religious or spiritual group). Historic 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 Site, Biosphere Reserve, Cultural Landscape, etc.):

4. Environmental Significance

Site 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 of site 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.)



“In all things of nature there is something of the marvelous”

Aristotle

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

1.- What is it?

Free – should imply that there is no coercion, intimidation or manipulation;

Prior – should imply that consent has been sought sufficiently in advance of any authorization or beginning of activities and respect time requirements of indigenous and traditional consultation/consensus processes;

Informed – should imply that information is provided covering (at least) the following aspects:

- The nature, size, pace, reversibility and scope of any proposed project or activity;
- The reason(s) or purpose of the project and/or activity;
- The duration of the above;
- The locality of areas that will be affected;
- A preliminary assessment 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;
- 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);
- 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 and representatives. 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 the beginning 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 consent on behalf of the affected peoples or communities.

4. How?

Information should be accurate and in a form that is accessible and understandable, including a language that the indigenous and traditional peoples will fully understand. The format in which information is distributed should take into account the oral traditions of indigenous and traditional peoples and their languages.

5. Procedures/Mechanisms

- Mechanisms and procedures should be established to verify FPIC as described above, including mechanisms of oversight, 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/spiritual 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 the consent given.

Source: “Permanent Forum on Indigenous Issues (PFII), Key Elements of the Principle of Free, Prior and Informed Consent, PFII, New York”.



4.3.1.5. Inventorying Implementation

Reaching this point, it is recommended to:

- Implement the inventorying activity according to the MoU and FPIC already accorded upon.
- Involve indigenous and traditional peoples communities and representative organizations in developing concrete activities of the inventorying process.
- Invest, when needed, in developing local capacities during the implementation process.

Bear always in mind that indigenous and traditional communities may make last minute changes that 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... most of the times, 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!.

4.3.1.6. Long Term Joint Monitoring and Evaluation (M&E) System

On a final stage of the process the following needs to be considered to secure the long term success of the project:

- If necessary, build the local capacities to effectively implement the accorded upon M&E System that is to collect the lessons learned in the field from the project implementation and consequent follow up activities.
- 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 present and future 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!.

4.3.2. (i) Stakeholders: indigenous and traditional rightful representatives, researcher(s) and government authorities.

(ii) Timeframe suggested: given the complexity of field activities, it is highly recommended to consider a time frame in the vicinity of 12 months for the successful completion of this phase.

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

4.4. Step 4: Information Compilation Phase

4.4.1. Methodology:

The registered Sacred Natural Sites information is to be filtered and condensed into several fields depicting the sites most relevant cultural and natural features (following the example set by various international databases) to eventually enable the replication potential of the collected data.

“The word Nature comes from the Latin, to be born, which is fundamental enough, and puts it under the healing of abiding mystery”

John Hay

The compilation of the resulting data will be as follows:

- Data collection on SNS is to be made *via* the registration template presented in the previous section.
- Data is to be collected individually for each Sacred Natural Site.
- Data gaps are to be also registered.
- Collected data is to be 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.

4.4.2. Tools

A database format including the following information:

- Name of Sacred Entity (native and western denominations).
- Indigenous and traditional peoples associated.
- Location (indigenous and traditional region).
- Coordinates (if available).
- Size (in hectares).
- Sacred entity category.
- In/out Terrestrial/Hydrological Priority Sites.
- Percentage of primary vegetation cover.
- In/out formal protected area.
- Degree of threat: high, medium, low.

4.4.3. (i) Stakeholders: researcher and his/her academic and/or funding source institution, database experts, indigenous and traditional rightful representatives, government authorities.

(ii) Timeframe proposed: 2 months

(iii) Benchmarks: database in registered Sacred Natural Sites.

4.5. Step 5: Dissemination Phase

4.5.1. 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 research subject, 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 FPIC agreement. Indeed, communities want to be able to use what is recorded in, and published about their Sacred Natural Sites.

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

Most of the times though these research works are highly technical and may be captured in foreign languages. Materials such as these are read by very few people and not many copies of them available. This relatively inaccessible material needs to be made more useful to communities. The proper channels to disseminate this information are discussed below in the stakeholder and suggested tools section.

4.5.2. Tools

- Posting project results on national and international websites (i.e. Alcoa Foundation, IUCN, Pronatura Mexico, The Rigoberta Menchu Tum Foundation, UNESCO, Task Force on Cultural and Spiritual Values of Protected Areas, etc.).
- Production and publication of Guidelines on how to implement step by step the methodology and tools developed.
- Articles on major research findings in scientific, cultural journals.
- Writing up project highlights in accessible languages in general information magazines.
- Writing up project highlight in local languages.
- Elaboration of appropriate documents for distribution of information among concerned communities.
- Engaging into ongoing processes and international fora promoted by IUCN and UNESCO (i.e. upcoming IUCN Congress in Barcelona, Spain, and Wild 9 Congress in Merida, Mexico).

4.5.3. (i) 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 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” and “The Wild Foundation”.

(ii) Timeframe suggested: 6 months for initial communication strategies though dissemination activities are advised to continue and build on new experiences for years.

(iii) Benchmarks: dissemination tools and strategies implemented.

*“Nature is full of genius,
full of the divinity; so that
not a snowflake escapes its
fashioning hand”*

Henry David Thoreau



CHAPTER V: Preliminary Testing of the Methodology and Tools

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

1. Evaluation Phase Results

Annexes 1, 2, 3, 4, and 5 capture 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 a protected areas' authority 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 manifest *au contraire* a genuine interest in the subject also shown by the indigenous and traditional representatives interviewed.

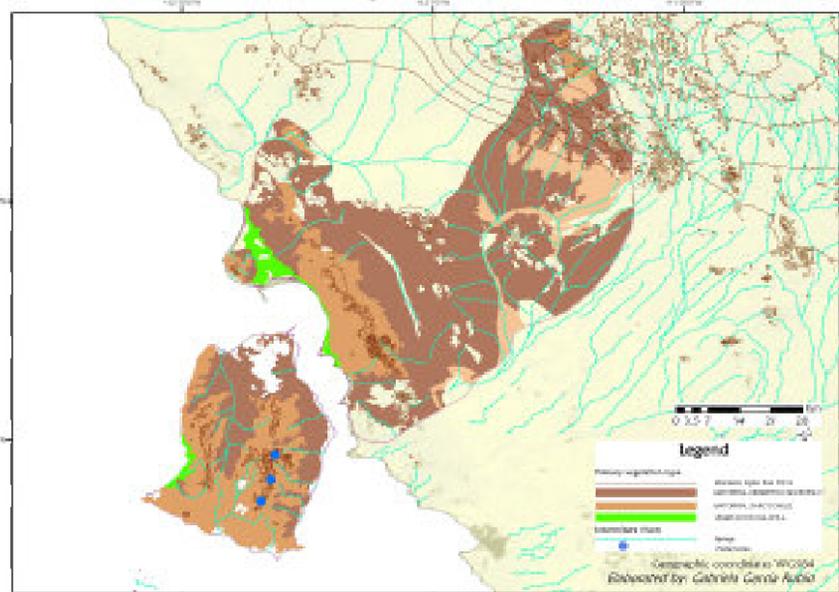
2. Sacred Natural Sites Potential Distribution Analysis Results

The following results proves the effectiveness and accuracy of the methodological approach developed in three Mexican Sacred Natural Sites case studies while identifying an additional SNS potential distribution area for a future prospecting exercise.

*“Call upon the Goddess
and God to protect you and
teach you the secrets of
magic. Ask stones and
plants to reveal their
powers – and listen”*

Scott Cunningham

Map 5 SNS case study: Tiburon island



2.1. Case Study: Seri Territory

Map 5 shows that the Seri indigenous region has one of the highest percentages (56-91%) of primary vegetation cover at the national level resulting from the sound traditional management system implemented by the Seri community. The author's previous field work has shown that indeed the Seri territory, including the peninsular and insular (Tiburon Island) extensions, is dotted with sacred entities varying in size, importance and significance. The Seri territory in its whole dimension can be categorized as a Spatially Definable Sacred Landscape dotted by various Sacred Natural Physiographical Features (water ponds, rock formations, coastal mangroves, etc.) that are revered by the community due to their spiritual significance.

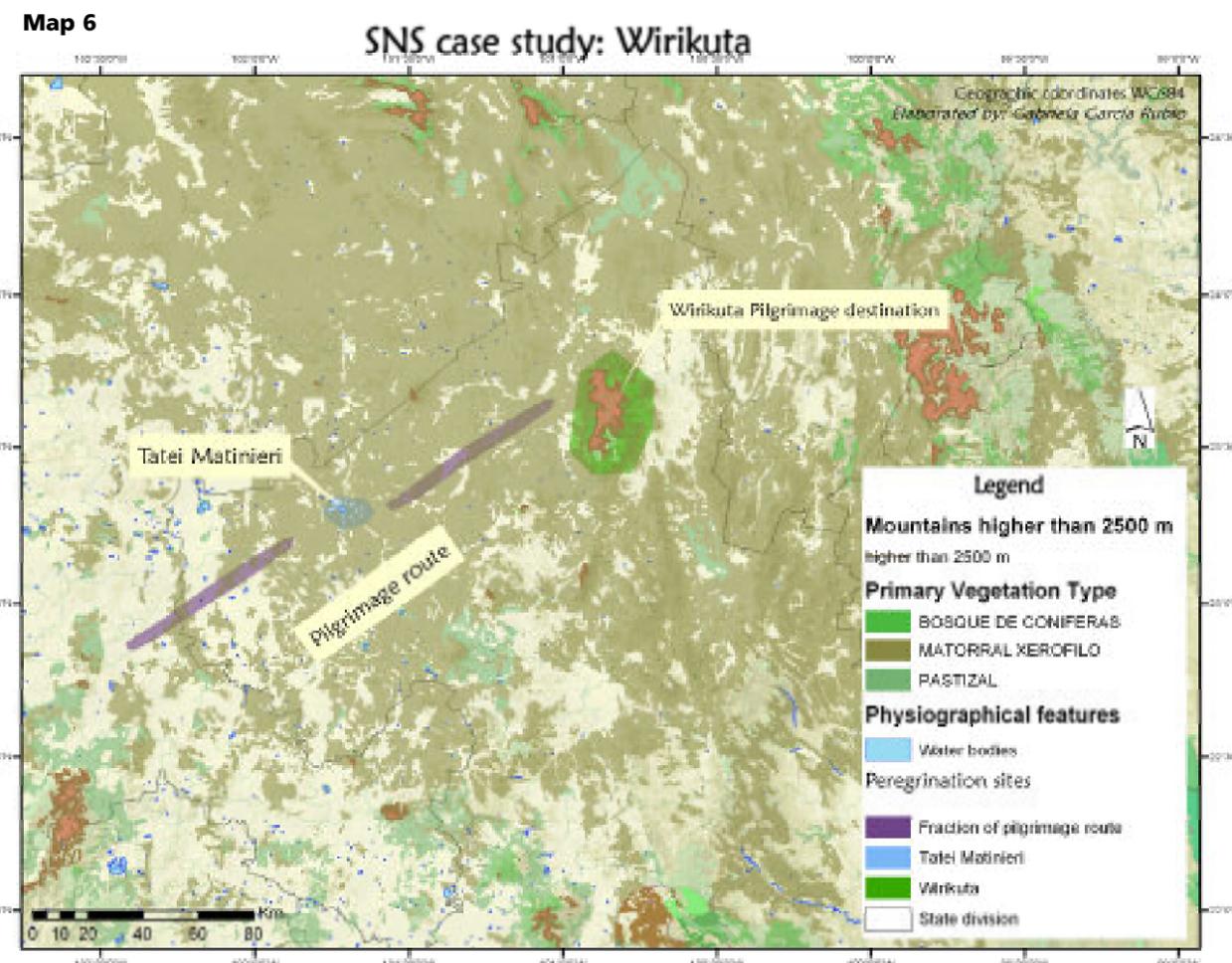
The Seri territory also contains communities of Sacred Floral and Faunal Species, since it is in its waters and dry lands that diverse sacred species (cacti, shrubs, marine turtles) with a medicinal use converge. These findings confirm the soundness of the criteria used in both the coarse and fine filters to delimit a potential SNS distribution area.

2.2. Case Study: Wirikuta

Map 6 illustrates another SNS case study recorded by the author. It encompasses the area known as Wirikuta, final destination of an annual pilgrimage ritual performed by the Huichols and not initially included in the *coarse filter* analysis that only registered indigenous regions with a permanent indigenous and traditional presence. This site, being visited only during the fall by the Huichol pilgrims, was to be included though, via the *fine filter* that contemplates the inclusion of these cyclic sacred destinations.

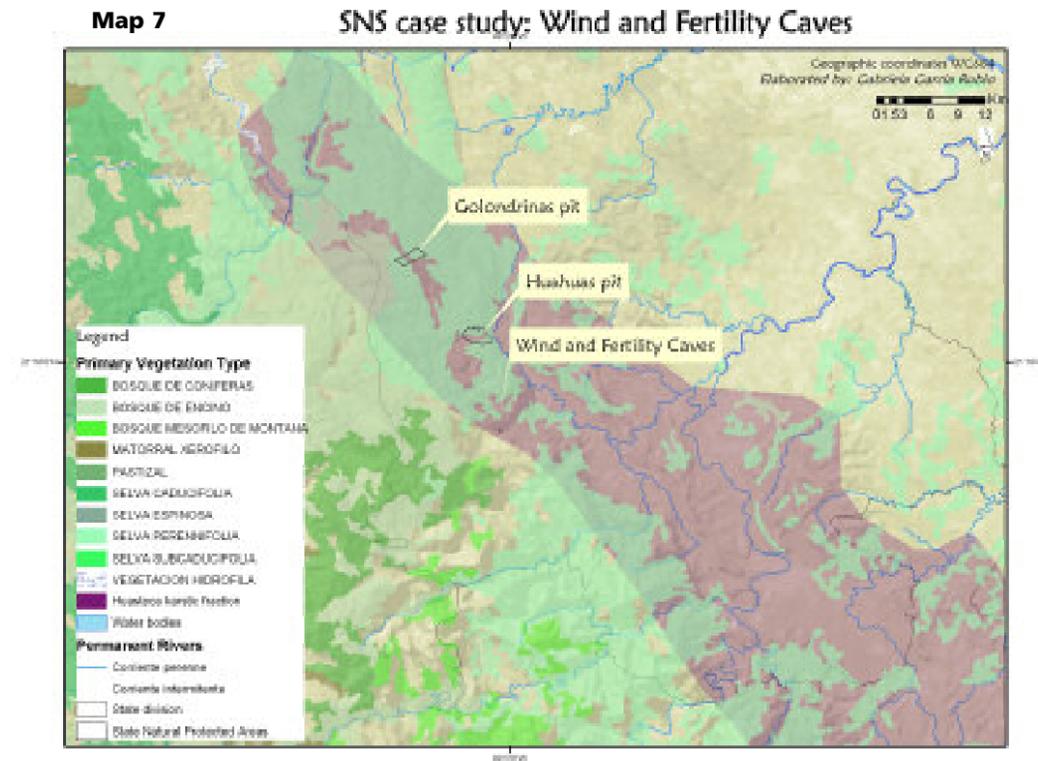
Wirikuta is a Spatially Definable Sacred Landscape (approximately 140,000 has) that is dotted with Sacred Natural Physiographical Features, such as water bodies (as identified in the map), mountains (above the 2,500 meters), rock formations, etc. On an end note, Wirikuta has a community of Sacred Floral Species, conformed by the “peyote”, the revered cactus of the Huichols, to be used in their communications with their gods.

As it was discussed earlier, it is interesting to note that the Huichol Spatially Disperse Sacred Landscape is united by a pilgrimage route, of which this map only shows a fraction, the Wirikuta area, and that extends throughout more than 800 kms throughout Central Mexico.



2.3. Case Study: The Caves of the Wind and Fertility

Another application of the methodology is to be shown next. As stated earlier, those degraded/highly degraded SNS potential distribution areas falling under the 34% mark for primary vegetation cover need to undergo an in-depth scrutiny to discard or confirm the presence of relict Sacred Natural Sites. **Map 7** shows the result of conducting such in-depth analysis.



This map depicts the Huastec indigenous region, a highly degraded environment falling below the 34% value for primary vegetation: the karstic nature of the area – also shown– gives rise to natural physiographical features such as caves, canyons, rock fractures, etc...all of which are held in reverence by the local indigenous and traditional peoples. The author conducted a thorough prospecting visit to some of the area’s most salient karstic physiographical landmarks and located a relict Sacred Natural Site occupying a mere 8 has. Indeed, this island of vegetation among overspread destruction is occupied by the Sacred Caves of the Wind and Fertility. The area constitutes a relict of the once ubiquitous tropical forest and plays a key role as a genetic reservoir and regeneration site, hence, its key importance for conservation strategies at the regional and national levels.

2.4. The Tarahumara and Yaqui/Mayo Indigenous Regions

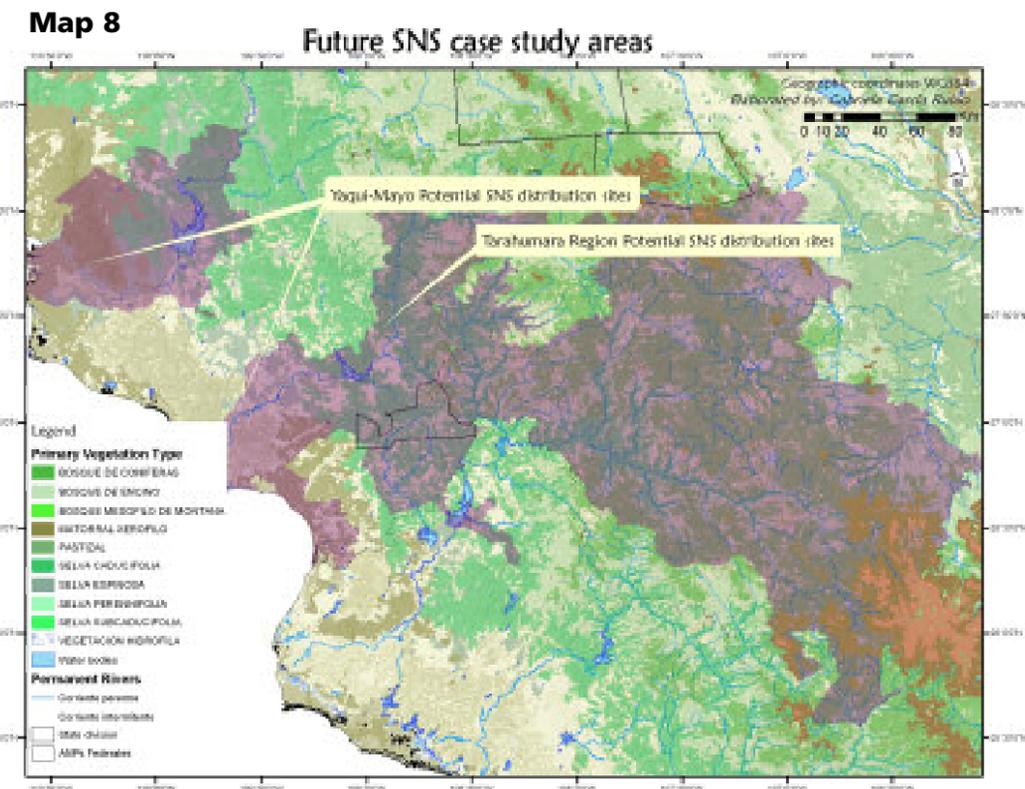
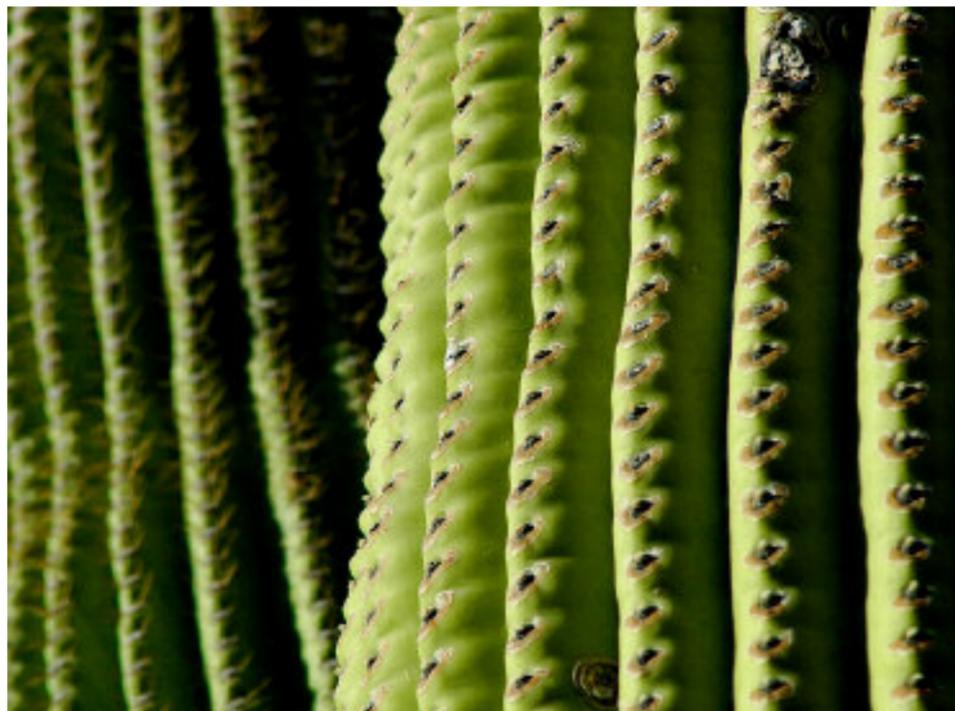
The optimal results obtained when applying the methodology on the previous case studies gave the author grounds to further expand the geographical scope of the search of SNS potential distribution sites and to concentrate first on those areas showing the highest percentages of primary vegetation cover. The focus of the analysis shifted then to the Northwestern Tarahumara and Yaqui-Mayo indigenous regions (**Map 8**) with a primary vegetation presence ranging from 56% to a 91% - similar to the Seri case- on both regions. Hence, it is highly recommended that a prospecting visit be conducted given the promissory perspectives depicted in the application of both the coarse and fine filters criteria.

3. Prospecting and Inventorying Phase Results

Of the various tools discussed for this phase, only the registration template has been used in all four potential Sacred Natural Sites distribution areas. In the case of Tiburon Island, Wirikuta and the Caves of the Wind and Fertility, the template was thoroughly completed given the ample prospecting activities carried out by the author on such sites. In the case of the Tarahumara region a very initial draft - after a brief stay in the area – was completed and in the case of the Yaqui-Mayo indigenous region the prospecting field trip is yet to be realized. These templates can be reviewed in detail in Annexes 8, 9, 10 and 11.

“Eventually, ritual was developed as a means of contacting and utilizing the energy within humans as well as in the nature world”

Scott Cunningham



4. Information Compilation Phase Results

The information captured *via* the review of these case studies was registered and then recorded according to the database format shown in the next page.

Indeed, these results could be considered as the basic foundations of what could be a future database/registry/inventory of Sacred Natural Sites in Mexico.

5. Dissemination Phase Results

The research results dissemination remains yet to be conducted pending a joint design by the author, IUCN and the Alcoa Foundation of a Dissemination Strategy expected to follow through the outlined steps for this Phase as discussed previously.

CHAPER VI: Conclusion

The conservation of Sacred Natural Sites has received an unprecedented attention and cover, 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 loable 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 /or 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 its/their thematic agendas.

“Science has beauty, power, and majesty that can provide spiritual as well as practical fulfillment... The crisis we face today demands more than superficial adjustment. Increasingly, it is realized that any efforts to safeguard and cherish the environment needs to be infused with a vision of the sacred”

Carl Sagan



Information Compilation Phase Results

Name and Location of Sacred Entity (native & western denominations)	Indigenous and Traditional Peoples	Location (indigenous and traditional region)	Coordinates	Size (has)	Category of Sacred Entity	In/out Terrestrial and Hydrological Priority Sites	% of Primary Vegetation Cover	In/out Formal Protected Area	Degree of Threat (high, medium, low)
Tiburón Island, Sonora	Seri (Comcáac)	Seri region	28° 39' 10" and 29° 22' 00" latitude North and 112° 13' 20" and 112° 37' 40" latitude West	120,756	Spatially Definable Sacred Landscape	In	90%	In	Low
Wirikuta, San Luis Potosí	Huichol (Wixarika)	Huichol region	NA	140,211	Spatially Definable Sacred Landscape	In	55%	In	High
Caves of the Wind and Fertility, San Luis Potosí	Tenek, Pame and Nahua	Huasteca Region	99 00 ó 99 07 latitude North and 21 47 or 21 50 longitude West	8	Sacred Natural Physiographical Features	In	5%	In	High
Tarahumara Sierra, Chihuahua	Tarahumara (Raramuri)	Tarahumara Region	NA	NA	NA	In	90%	Out	High
Mayo and Yaqui Territory, Sinaloa and Sonora	Mayo and Yaqui	Mayo and Yaqui Region	NA	NA	NA	In	90%	Out	High



The experience so far has shown that though Sacred Natural Sites 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. Again, and unless, this topic is well anchored and solidly established as a consolidated institutional program to be housed at the appropriate institutional venues there exists the risk for Sacred Natural Sites to become a “passing trendy issue”.

“Natural objects themselves, even when they make no claim to beauty, excite the feelings, and occupy the imagination. Nature pleases, attracts, delights, merely because it is nature. We recognize in it an Infinite Power”

Karl Wilhelm Humboldt

The conservation of Sacred Natural Sites needs to transcend this occasional – though encouraging - presence in the international conservation agendas and become a “must” that is to empower the organizations adopting this conservation model as pioneers in the implementation of a holistic, bio-cultural approach towards conservation.

It is from these lines that I invite organizations such as IUCN to set the example by establishing a permanent body in its institutional framework to effectively explore, analyze, document, and eventually promote and coordinate the effective conservation of Sacred Natural Sites worldwide. The current findings on their validity and great potential as bio-cultural conservation tools utterly justify and demand a deeper commitment on the part of conservation organizations. Unless and until, an organization of the sorts of IUCN adopts and embraces the subject, it will not be viewed as a “serious”, “worth-exploring” conservation model by the conservation community in general, and will probably end by falling into local/regional marginal conservation efforts conducted by a minority.

It is here that a reflection shared by Nancy Nash in “The Tree of Life” comes in quite handy: “When Sir Peter Scott died in 1989 he left a rich legacy of humanitarian endeavor – accomplishments in art and sport, appreciation of music shared with others as a teaching tool, and love of nature and a pio-

neering role in creating international institutions (IUCN, WWF) dedicated to protection of all life on earth. His greatest gift to future generations, however, may have been his model of holism in conservation, embracing *nature and culture* as integrated rather than separate elements.”

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 research project 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, many Sacred Natural Sites bound to disappear even before they are known or registered. As this document states early in the discussion, 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 bio-cultural 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.

“Nature holds the key to our aesthetic, intellectual, cognitive, and even spiritual satisfaction. Each species is a masterpiece, a creation assembled with extreme care and genius”

Edward O. Wilson



Acronyms

ACCA	The Andean Community Conservation Areas
ADB	Asian Development Bank
CBD	Convention on Biological Diversity
CDI	National Commission for Indigenous Development - Mexico
CODENPE	National Council on Indigenous Peoples - Ecuador
CONABIO	National Commission for Knowledge and Use of Biodiversity - Mexico
CONANP	The National Commission of Protected Areas - Mexico
FPIC	Free, Prior and Informed Consent
FD	Forest Department - Kenya
GEF	Global Environment Facility
IADB	Inter American Development Bank
IEN	Indigenous Environmental Network
IIPP	Indigenous Initiative for Peace
ILO	International Labour Organization
INEP	National Research Institute-Guinea Bissau
ITC	Indigenous and Traditional Community
IUCN	The International Union for Conservation of Nature
IUCN-EARO	The International Union for Conservation of Nature – Regional Office for Eastern Africa
KWS	Kenya Wildlife Services
MAB	Man and Biosphere Program
MoU	Memorandum of Understanding
NEAP	National Environment Action Plan
NGO	Non Governmental Organization
NMK	National Museums of Kenya
NBSAP	National Biodiversity Strategy and Action Plan
SEMARNAT	Ministry of Natural Resources - Mexico
SNS	Sacred Natural Site
OAS	Organization of American States
TEK	Traditional Ecological Knowledge
UN	United Nations
UNESCO	United Nations Educational Scientific and Cultural Organization
UNEP	United Nations Environment Programme
WB	World Bank
WCMC	World Conservation Monitoring Center (UNEP)
WCPA	World Commission of Protected Areas (IUCN)
WHC	World Heritage Convention (UNESCO)
WHS	World Heritage Site (UNESCO)
WWF	World Wide Fund For Nature

Glossary

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

Archaeological Site: is a place (or group of physical sites) in which evidence of past activity is preserved (either prehistoric, historic or contemporary) and which has been, or may be, investigated using the discipline of archaeology and represents a part of the archaeological record. In contrast, this research project contemplates Sacred Natural Sites as places where rituals and ceremonials are currently performed by indigenous and traditional peoples.

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. The main objective is to ensure that anyone who participates in the research project is informed about:

- how the researcher proposes to conduct the research.
- what the researcher is asking them to do.
- what the research products will be.
- who will own them and rights to reproduce them.
- how the researcher 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.

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 Traditional Ecological Knowledge (including 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).

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, 2000).

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

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.

Spatially Definable Sacred Landscape: having well-defined and cohesive spiritual and cultural norms and practices as well as geographical limits ranging from 300,000 to 8 has. approximately.

Spatially Disperse Sacred Landscape: having an extensive geographical influence zone; transcending geopolitical borders, usually unified and connected through sacred pilgrimages' routes or symbolic Sacred Natural Physiographical Features such as rivers (i.e. Ganga).

Sacred Floral and Faunal Species: include those communities of species that are attributed a sacred, ritualistic, medicinal use by the community. Their presence confers a sacred status to either a landscape or Sacred Natural Physiographical Feature.

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.

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 ethnolinguistic 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 research paper, whenever the discussion 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, 2000).

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ANNEX 1

Questionnaire for Conservation NGOs – National Organizations

Basic Information

Name of the organization: Pronatura Mexico, A.C.

Name and position of individual:

E. Alejandra Salazar Dreja
Environmental Policy Director

Date of the interview:

August 4th, 2007

Location:

Mexico City, Mexico

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. 01740

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.

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 built 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.

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 an 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 helps 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 certain sacred natural sites.

Capacity Building

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 does have the necessary knowledge and training to do it.

If the answer is no, would you 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? Please elaborate

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 individual: Director, Protected Areas Fundraising Unit

Date of the interview: 26 August 2007

Location: México City

Contact Information: NA

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 by Mexican people up today

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?) NA

If the answer is yes, does the management plan of any of the reserves contemplate the management of these sites? NA

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?

Absolutely

Research Project on Sacred Natural Sites

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

INAH (National Archaeological Institute) 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

Capacity Building

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-cultures issues and/or Sacred Natural Sites? If yes, please elaborate on format, lessons learned, etc. NA

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 – International Organizations

Basic Information

Name of the organization: WWF Mexico Program

Name and position of individual: 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 considered important for a certain group of people as part of their religious traditions.

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.

Sacred Natural Sites and Conservation Projects

Have you encountered Sacred Natural Sites in your conservation work? Yes, but I haven't visited them yet. Neither do 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 inventorying 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.

Capacity Building

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 you be willing to undertake capacity building courses? Sure, with 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? Please elaborate

Thank you for your collaboration!

ANNEX 4

Questionnaire for the Academic Institutions

Basic Information

1 *Name and position of individual:* Antonio Ordóñez, Professor and Researcher

2 *Name of Research Institution:* National Autonomous University of Mexico-UNAM

3 *Date of interview:* September 1st, 2007

4 *Contact Information:* bordonez@oikos.unam.mx

Sacred Natural Sites and the country’s natural patrimony?

Are you familiar with the concept of Sacred Natural Sites? Yes I am

If the answer is yes, what would be your definition of a Sacred Natural Site? Could be a special natural protected area in which their inhabitant’s development activities preserve culture, traditions, and landscape knowledge between all the ecosystem compounds.

Are you familiar with the concept of bio-cultural conservation? Yes I am.

If the answer is yes, would you favor the implementation of this conservation model in Mexico? Yes I would, because this model is integral and permits a better development of the conservation

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 there linkages to cultural heritage, linguistic diversity, etc.. currently under consideration?

Yes but only a few strategies integrate all these points

Research Project on Sacred Natural Sites

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

Will the research product or process be of any practical benefit for the academic community? It will benefit the community, the academy, as well 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 at 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; specially the original idea to integrate the concept of bio-cultural conservation in the national conservation strategies.

Thank you for your collaboration!

ANNEX 5

Questionnaire for Indigenous and Traditional Peoples Organizations

Basic Information

Name of the organization: Cam Coati

Indigenous and Traditional Group it represents: Seri indigenous peoples

Date of constitution: Year 2000

Name and position of individual: Diana Luque, Adviser

Date of interview: 24 July, 2007

Contact Information: Punta Choice, Seri Territory, Sonora, México

Your organization work

In what kind of work is your organization involved? Please specify

Cam Coati 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.

Has 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 creational 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” were 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.

Please elaborate on the constraints/problems identified in your work with cultural/spiritual issues and/or Sacred Natural Sites. On the other side, what have been your positive experiences?

One of the main constraints identified was that the older generations and the most traditional and conservative 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 knowledge is passed orally from one generation to the next and the current changes affecting the life style of the communities have threatened this oral transmission mechanism. Those in favor of disclosing the sites were trying 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 territories...some of the stories have been recorded in the native Comcaac 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 inclusive 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's 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 especially 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 the 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 individuals from research or public institutions that are close to the community. It is also of key relevance to identify 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 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 strategies have and need to be devised when approaching a community. For instance, the Seri case, is rather simple when it comes to this point since the territory is in 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's natural resources is optimal, etc...it is in this sense that identifying the Seri rightful representatives bodies was a relatively 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 in 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 economic 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. Themes 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 indigenous 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

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 _____, 20__.

Memorandum of Understanding

between

[ITC rightful representative bodies]

And [The Researcher or Research Institution] ("The Researchers")

(collectively referred to herein as the "Parties")

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 royalties 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 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 license 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 is 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 are 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 risks of personal injury and property damage attributable to the negligent acts or omissions of the party and its officers, employees, and agents.

Notification

Any notice of written communication required under this agreement may be given as follows: [addresses, telephone numbers and fax numbers of both Parties]

Amendments

Amendments to this Memorandum of Understanding must be in writing and signed by authorized representatives of the [ITC rightful representative bodies] and the [research institution].

Duration of Agreement

The term of this Memorandum of Understanding is from _____, 20__ to _____, 20__ , and may be renewed. The Parties will review this agreement [annually]. The Parties may terminate this Memorandum of Understanding in writing at any time subject to ___ days notice.

SIGNED BY THE PARTIES ON THE DATES SET OUT BELOW

Signature: _____ Date: _____
Signature: _____ Date: _____

Source: Desert Knowledge, Cooperative Research Centre- CRC

ANNEX 7

Free, Prior and Informed Consent (FPIC) Form

This FPIC form for an informant (subject) is to be used in the context of research that requires the knowledge of the informant to be shared with the researcher. This form could be used as a base in developing a form for a specific research project. The ‘research words’ and many others may not be familiar to people with Spanish as a second language and a simple phrase could be substituted. Sometimes it will be better to use and explain any technical terms that are important in the project so that people become familiar with them.

If a project is ongoing over several visits and the same individuals are acting as informants, it may not be necessary to fill out this form each time. Nevertheless, it is incumbent on the researcher to ensure that the informant is again fully informed about the project and updated as to its status. An essential element in the FPIC is that consent can be withdrawn at any time and informants must be alerted to this by the researcher. Consent is not a one-off event that this form alone can authorize.

This form is a tool to assist discussion and ensure that the participant is aware of their rights and the fact that you – the researcher – are talking with them to gather specific information about an issue. Ultimately it will be the sensitivity and ethical grounding of the researcher that will ensure that the research does no harm to those who participated.

Consent Form

1. I, *(please print name)*
wish to take part in the research project entitled:

.....

2. I have read, or had explained to me, the Information Sheet called:

.....

.....

3. The researcher has talked to me and told me what I want to know about the project.

4. I agree to take part. I know I can say yes or no. I don’t have to answer any question I don’t want to. I know that I may change my mind and stop at any time.

5. I have been given the opportunity to have a member of my family or a friend with me while the project was explained to me. And as far as practicable I have been offered an interpreter if necessary.

6. I agree to this interview to be taped/videotaped. I know I can say yes or no.

7. I agree that information gathered for this project may be published provided my name or other information which might identify me is not used; that is unless I specifically request that I be identified.

8. I understand that all information provided is treated as confidential and will not be released by the researcher unless required to do so by law.

9. I understand that any personal benefit I receive from working on this project will be openly discussed and the rate of pay (if any is being received) agreed at the onset of the project.

10. I will be given a copy of this PICF and the Project Information Sheet to keep.

The contact details of the researcher are as follows:
.....

(signature of informant/parent of informant) (date)

WITNESS
I have described to

.....

(name of informant) the purpose, methods, demands, risks, inconveniences, discomforts, and possible outputs of the research (including publication of research results). In my opinion s/he understood the explanation.

Role in project:
.....

Name:

.....
(date)

Source: Desert Knowledge, Cooperative Research Centre- CRC

ANNEX 8

REGISTRATION TEMPLATE — WIRIKUTA

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

Name: *Wirikuta, 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 place touch them magically.*

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 Lumholz, 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 Uto-Aztecan-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 settlements in the states of Nayarit and Durango.²² The Huichols of Jalisco are organized in three major communities and one so-called “Annex” totaling a population of 13,67123 . 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 individuals 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-consumption 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 (Tatiana), judge, captain and constable/warrant officer. The choosing of the communal authorities falls upon the “Council of Elders” Mara 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 agrarian authorities, which are represented by the “Communal Goods Authority” and are in charge of implementing a rational use and administration of the community natural and territorial resources. Both representative bodies report to and submit to consideration the Communal Assembly all decisions that are of relevance to 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 a perennial communication 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 Tukipa or ceremonial center. In the state of Jalisco there are 23 tukipa, 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 tukipa 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 Potosi, expanding through the municipalities of Catorce, Matehuala, 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 conformed by Mexican mestizos. This area known locally as the Potosino plateau and is one*

of the most condemned areas of the country due to poverty and massive emigration to other cities and abroad in search of better opportunities.

The most important town located in the Wirikuta area is Real de Catorce which is an old mining village in which three worlds are put together. The first, the most ancient and secret one, belongs to the Huichols. For centuries now, they sanctified this part of the desert and they have made their pilgrimage in search of the Divine One, the peyote. And neither the conquest, nor the persecutions of the Holy Office, 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: *140-211-85 has*

Spatial classification of sacred entity: *Spatially Definable Sacred Landscape*

3. Protection status

If within the limits of a protected area, specify which: *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 Wixarika and of their sacred sites as well as their historic-cultural route to be located in 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 succeeded in safeguarding the integrity of the Huichol sacred space. 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, that 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-decreed as a Sacred Natural Site while keeping the very same boundaries.

The inclusion on the decree of the San Luis portion of the pilgrimage route sent a clear message to the other states sharing the route to eventually restore the right of way of Huichol pilgrims while traversing their ancient pilgrimage routes. It is important to note that it would be only natural for the Huichols to “recuperate” these routes since they conform an integral part of their territory, a concept that most of the times escapes the rationality of our westerners ways.

Current authority (government, community, religious or spiritual group). Historic evolution of management authority: *The reserve is administered by the State’s environmental protection agency, the so called SEGAM.*

Management instruments, if any (management plan, co-management model, community agreement, land use plan, other): *A management plan has been designed for the reserve though its official approval is 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 condemned areas in Mexico due to poverty and massive emigration to other cities and abroad, the management plan mandate is two folded: on the one hand, it’s mandate is to safeguard the Huichols 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 Huichols 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 Maxaujata, Tatei 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. Wirikuta is trying to change this premise. Although 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 which 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 area 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 Huichols.

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: *None*

Relationship to international categories (World Heritage Sites, Biosphere Reserve, Cultural Landscape, etc.): *None*

4. Environmental Significance

Ecosystem Type/Uniqueness: *Wirikuta is located in the Chihuahuan Desert of the State of San Luis Potosi in Mexico, a WWF Global 200 ecoregion. The Chihuahuan is one of the most biologically rich and diverse deserts in the world, rivaled only by the Namib-Karoo of southern Africa and the Great Sandy Desert of Australia. It stretches nearly 250,000 sq. miles (630,000 sq. km) from the Mexican plateau into southeast Arizona, 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 grasslands of the northern desert. In the desert scrub, roadrunners scurry after earless lizards, while golden eagles search among the agave and creosote for black-tailed jackrabbits.

Forests of yucca and agave create images of unique beauty. Nearly a quarter of the world's cactus species thrives, many existing only on a single valley or hillside. Raptors and millions of other birds, including vermilion flycatchers, yellow-billed cuckoos and willow flycatchers, find food and shelter, while contributing to maintain the ecoregion's delicate and imperiled natural balance. An apparent paradox, the Chihuahuan is important for both its terrestrial and freshwater 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, cichlids, pupfish and other species that are found nowhere else in the world have evolved.

Priority Terrestrial Region – CONABIO: *No*

Hydrological Terrestrial Region – CONABIO: *Yes*

Type of vegetation (primary, secondary): *Primary*

Degree of conservation: *High*

Watershed protection: *The expanded protected area encompasses the Sierra de Catorce mountain range, home to key watersheds for the entire region.*

Other: *NA*

5. Cultural Significance

Importance of site 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: Haramara (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; Hauxa Manaka (Cerro Gordo –Fat Hill- in the state of Durango) representing the northern most point where the canoe of the goddess Nakawé, mother of all gods, finally rested and where the wind and the royal eagle, her messengers, were born; Xapawiyeme (Isla de los Alacranes – Scorpion Island- in the Lake of Chapala in the state of Jalisco) that represents the southern tip where 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 ancestors and deities in the pilgrimage they undertook 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 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 tukipa. 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 peyoteros. Not all the jicareros undertake the sacred pilgrimage since some stay behind to look after the tukipa and await eagerly the peyoteros 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 jicuri, the flower that talks. When they ingest peyote, their gods reveal the distribution of powers and races; what sustains their own lives; the way in which intelligence and envy 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 cosmogony. 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: *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 generates an additional impact on the surroundings, including the transformation of the Huichol sanctuaries and the unrestrained picking of peyote, which has caused the destruction of distribution areas of the plant. Other threats that in the near future fall upon Wirikuta are: the expansion of its agricultural frontiers, that give way to the fragmentation of the territory with roads and breeches; the picking and illegal traffic of flora and fauna species; the overexploitation of aquifers; the pouching of offerings that the Huichols place in the area; furtive hunting and forest fires in the mountain range of Catorce.*

Government and NGO involvement: *Several international and national organizations have begun to specifically address the need to recognize, protect, and manage sacred natural sites. However, these individual initiatives 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 cooperation 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-IUCN, UNESCO, the Rigoberta Menchu Tum Foundation, and the National Indigenous Institute of Mexico agreed on the need to anchor experiences on the ground testing the viability of sacred natural sites as a conservation tool and to pursue a common initiative on this important subject.

Financial support, if any: *One of the financial mechanisms set aside for the management plan effective implementation is that of a trust fund specifically designed to support the state's network of protected areas. The San Luis Potosi 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 seed capital was of approximately USD 80,000.*

7. Information Sources

References/Bibliography: *NA*

Videos: *NA*

Graphic materials/visual aids: *NA*

8. Lessons learned that might help other Sacred Natural Sites managers: *It is of key importance when protecting Sacred Natural Sites around the world to set up a legal recognition of their status 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.*

9. Annexes (if pertinent, decrees, pertinent legislation, etc.):

- *State Environmental Law.*
- *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 pluricultural state.
- Mexican Agrarian Law, 106
- Mexican General Protection Law for the Environment Art. 44
- Convention on Biological Diversity, Art. 8j.

ANNEX 9

REGISTRATION TEMPLATE - 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 Comcáac (Seri) territory. The Infiernillo Channel between the island and the mainland (known as Xepe Cosot) also belong to the Seris who have exclusive fishing rights over the Channel.

Origin and significance, spiritual and cultural context: Tiburon Island – which has been occupied by the Seris for approximately 2000 years - is the name that was given to Taheöjc during the European colonial period. In a historic context it is hard to know with a 100% degree of certainty what Taheöjc meant/represented for the Comcáac. This is due mainly in part to the ethnocentric interpretation of the Europeans when they first established 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 Comcáac there is null reference to their own belief system and to their ways of organizing 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 cosmovision is embodied in each one of its natural features.

Indigenous and/or traditional groups involved: Comcáac is the native denomination for the Seri indigenous group. This group has inhabited the Sonoran Desert for approximately 2000 years now in a territory that encompasses the central desert coast, Tiburón Island, San Esteban Island and other islands such as San Lorenzo and Angel de la Guarda. The mainland portion of the seri territory is located in the Gulf of California Region. It is widely assumed that the Comcáac 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 territories which were well defined according to the use given to their natural resources (Moser, E.). Other authors sustain though that their tribal organization was rather flexible and highly influenced by environmental, demographic, political and economic conditions (Sheridan). When the Spaniards arrived to Comcáac, only one or two of these groups occupied Tiburon Island on a permanent basis maintaining occasional communication with the other clans or 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 as was the case San Esteban Island settlers (Bowen).

The Seris suffered –together with other Mexican indigenous groups- the arrival of the Spanish conquistadors and most recently the impact of the Mexican government unilateral ways. According to oral tradition, the Seris were in the brink of extinction in the early 1900’s the total population amounting to only 70 individuals who took refuge in Tiburon Island against outside aggressions. This also resulted in the irreversible fragmentation of their original territory. It was only thanks to their spirited nature that the Seris 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 economic activities are focused on the exploitation of local fisheries, art crafts, hunting and gathering 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 marginalization 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 Tiburon 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 fi-shing rights areas for the Comcáac.

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

Extension in Hectares: Tiburon Island has 120,756 has while the continental counterpart of the Seri territory amounts to a total of 91,322 has.

Spatial classification of sacred entity: Spatially Definable Sacred Landscape

3. Protection status

If within the limits of a protected area, specify which: Area of Protection of the Flora and Fauna “Islands of the Gulf of California”.

Current authority (government, community, religious or spiritual group). Historic evolution of management authority: Seris are the legitimate owners of Tiburon Island. This in turn makes them the main authorities in the management of the natural resources as established by the Mexican law of Indigenous Rights and Cultures. The Comcáac have their own traditional government bodies, the Council of Elders acting mainly as a tool to reach consensus among the community. The traditional governor administers Tiburon Island territory. The traditional government has also a “constable” for the mainland administration that is Desemboque and Punta Chueca settlements.

Although federal, state, and municipal agencies together with the Mexican environmental ministry, the federal environmental enforcement authority and others have initiated works within Seri territory they need the prior consent of the Seri traditional authorities to implement their programs. Nevertheless, years of economic and political margination have eroded the effective power of the Seri traditional authorities to exert the corresponding authority upon the territory.

In addition, and even though the management of the Seri territory has set an example at the national level, the Seri traditional authorities feel that they still need to go further at implementing an environmental policy emanating from the community’s traditional knowledge systems. In summary, the Seris are not only trying to guarantee ownership when it comes to the management of their natural resources but are also seeking to incorporate the cultural parameter as the working premise that will dictate not only the environmental management but will also offer them a chance to recreate their cultural identity.

Management instruments, if any (management plan, co-management model, community agreement, land use plan, other): The Seri community has a “Regulatory System for the Management of Nature”, its three main components being:

1. Traditional-historic component

It is a result of the Seri cultural heritage and encompasses the “Seri territory network of knowledge”. This constitutes a pretty effective natural resources management system that ranges from the assignment of management rights according to familiar lineage to the access denial to certain sacred sites (a total of 29,753 has. so far). It can also be envisioned as a “living system” that is transmitted orally from generation to generation. To ensure a safe transmittion of this traditional knowledge, the Council of Elders has produced the “Hant Icacoot Hipix Comcáac Yaat Quih Haha” (the Map of Comcáac Sites with Cultural Value) that in a first edition covers those sites along the Tiburon Island Coast and the Infiernillo Channel (Taheöjc ITEL xah xepe cosot xah): this map identifies 191 sites along the island coast and 71 within the Infiernillo Channel. This map is an example of the cultural heritage that the Council of Elders is leaving behind for Seri future generations. This map was also conceived to become a tool for the Seri environmental and education system while providing the cultural insight for the territories management.

2. Internal-modern component

As a survival strategy, the Seris are being integrated to the global and national market economy, especially through their commercial fishing activities and to a minor extent by producing local art crafts. This decision to join in the “market” is leading to an overexploitation of their natural resources and, in certain cases, to the pollution of the Infiernillo Channel. In light of these threats, the community has designed damage control strategies to reduce the current natural resources uncontrolled depletion such as temporary commercial fisheries bans and restricted access to resources by outsiders. In most of the cases the Seris are being advised in the implementation of these strategies by national and international experts.

3. Official Component

This component results from the influence of federal environmental policies in Seri territory

that have resulted in the implementation of federal environmental planning regulation and sustainable development policies. The best example of the federal environmental law impact was the decree of Tiburon Island –in 1963 and without prior consultation with the Seris- as a “Natural Reserve Area and National Wildlife Refuge”. In 1974, shrimp fishing activities were called to a halt altogether along the Infiernillo Channel. As years go by, federal environmental policy has proven to become more complex, strict and its effects have become apparent throughout the Seri territory: the Seris must obey these bans although they are not directly responsible for the concerned species depletion. Their traditional uses and celebrations are also affected by these measures since they can no longer access the species to perform certain rituals associated with them. Such is the case of the marine turtle, the so-called “caguama”.

Federal environmental planning has produced several tools to manage the Seri territory. Tiburon Island was included in the Reserve Area and Refuge for Migratory Birds and Wildlife of the Gulf of California. The Reserve has a general management plan that includes Tiburon Island. The management plan clearly establishes and recognizes the rights given to the Seris by the national constitution, the OIT 169 and the Convention on Biological Diversity. It was from this main plan that a management subprogram was produced with an emphasis on the administration of the Tiburon - San Esteban archipelago system. This effort has been coordinated by the Reserve authorities showing an effort to progress vis a vis social participation though 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.

Land tenure status: The Comcáac territory encompasses Tiburon Island (communal land) and a mainland section in the central Sonoran Desert (conformed as ejido land). The same presidential decree recognizes the Seri exclusive exploitation rights over the Infiernillo Channel fisheries. According to Mexican Federal Law, the administration of the nation’s islands falls upon the federal government. Tiburon Island is of key importance for the nation since it is the largest island in the country and has become a strategic spot according to national security experts. Nevertheless, Tiburon Island is legally owned by the Seris under the category of “communal land”. There are also state and municipal laws that do affect the island’s management: in the case of the state government, the island has become an attractive potential focus for tourism development.

Monitoring and Evaluation System (if any): The Seri Regulatory System for Nature’s Management (SRAN by its initials in Spanish) implements its own M&E systems based upon traditional knowledge. This system has not been structured according to western M&E ways and it does not have an official recognition yet. The Traditional Guards on the other side oversight the sustainable use of the territory’s natural resources. These traditional guards have been recognized as such by the Federal Environmental Law Enforcement Authority (PROFEPA by its initials in Spanish).

The monitoring of the UMA’s proper management is carried out by a group of so-called “paraecologists” that do control the well being of the pronghorn species. This group is conformed 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 turtles supported by the local NGO Comunidad y Biodiversidad A.C. (COBI) where the Seris do play an active role.

Relationship to formally declared protected areas or other Sacred Natural Sites: Comcáac sacred sites location have been kept in secret for centuries now. Nevertheless, and due to current threats menacing their very integrity – among them the invasion of ignorant tourists – have prompted the Seris to act in search of both national and international protection legislation that will ensure their survival for the future generations. Other indigenous peoples that also envision the whole of the Gulf of California as a sacred space and that suffer from the very same threats are those of the cucapás, pápagos, yaquis and mayos. The Seris though have led the way when it comes to the protection of their environment and their sacred sites.

Relationship to international categories (World Heritage Sites, Biosphere Reserve, Cultural Landscape, etc.): None to international categories as such. It is worth mentioning though that the Seris are actively pursuing sustainable development strategies in the management of their territory. Among those explored it is worth mentioning that of the UMAs (Units for the Conservation, Management, and Sustainable Use of Wildlife), a management tool derived from national environmental policies. Tiburon Island has also been incorporated to the Area of Protection of the Flora and Fauna “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 San Lucas in the Baja California peninsula’s southernmost tip and to Cabo Corrientes, in the state of Jalisco. It 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 seas 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 subtropical and rich waters thrive two of the world’s largest whale species: the blue whale and the fin whale. However, 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 fleets go after the lucrative blue shrimp, a species so large in size that a single individual can be worth between \$1.00 and \$1.50 USD. In addition, some of the Gulf islands serve as important nesting sites for migratory and resident bird species and breeding grounds for sea lion colonies.

In addition to its marine and coastal biodiversity, on the dusty desert hills that surround the Gulf, stand the world’s two 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 terrestrial portion of the so called Sonoran Desert. This desert expands across the Mexican states of Sonora, Baja California Norte, Baja California Sur and a fraction of Arizona and California in the United States (Shreve, 1951 en Diaz Martinez, 2001). When compared to the other three North American Deserts, those of Gran Cuenca, Mojave and Chihuahuan (Diaz Martinez, op.cit.) this is said to be the most complex in terms of its ecosystems dynamics. “The flora and vegetation of the Sonoran Desert has been thoroughly studied by several authors (Shreve, y Wiggins, 1964; Felger, 1980; MacLaughlin, 1986; Ezcurra et al., 1987; Robichaux, 1999) that have shown its great diversity. Shreve (1951) grouped the Sonoran Desert vegetation into 7 subdivisions according to the characteristics and organization of the floral communities giving each a designation according to the traits of the dominant plants.

The extent of each subdivision depends on the variation of the topographic and edaphic characteristics of the region. These subdivisions are: 1. The Vizcaino Region (...). 2. Gulf Central Coast (...). 3. Sonoran Plains (...). 4. Sonoran Foothills (...). 5. Arizona Plateau (...). 6. Colorado River Low Valley (...). 7. Magdalena Region(...).”(Diaz Martinez, op.cit).

Priority Terrestrial Region – CONABIO: Yes

Hydrological Terrestrial Region – CONABIO: Yes

Type of vegetation (primary, secondary): Primary

Degree of conservation: High

Watershed protection: High

Other: NA

5. Cultural Significance

Importance of Site for indigenous and traditional communities: In order to assess the cultural/spiritual meaning of Taheöjc for the Seris it is important to go back to two ideas previously discussed: 1. In a historic context it is quite hard to establish with a 100% certainty the punctual spiritual role played by the island; 2. Given the quasi extinction of the Seris as a community in the early 1900’s their traditional knowledge and communal organizations were severely decimated/eroded. Nevertheless, and given the key role played by the island for the survival of the Seris – it was their very last refuge – the current cultural/spiritual meaning associated with 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.

The role played by Taheöjc in the Seri society can not be understood without analyzing and realizing the deep connotation that the concept of “territory” has for this indigenous culture, a trait which is shared by the vast majority of indigenous peoples in Mexico. The Seri “territory” encompasses the land, mountains, rocks, winds, water and air, the Seris being an intrinsic part of this whole known to us as “nature”. For them, the mountains and the rocks are the bones conforming their bodies: sea water, rivers, rains and springs are the blood circulating through their arteries; the wind is their breathing/respiration, it is the air that enters their bodies giving them life; the soil of their territory is the skin of their bodies...the whole Seri territory conforms the anatomy of their body, being Taheöjc the heart of this being (Sub-Management Program Tiburon - San Esteban Island, 2000).

The perception of the concept of “territory” is associated with an existential connotation. To be a “cmique” (singular for Comcáac, “the people”), one needs to be surrounded by the unity of the land, water, ocean, sky, winds, cosmos and biodiversity all of these elements that conform the concept of “territory”. Without this cohesivity and unity embodied by the “territory” one can not be a cmique, that is, a human being. This perception reinforces the sense of belonging, the strength of the spirit, the fact that the individual can only exist by being part of a greater whole that of the community, the “territory” and the natural resources associated with it. This is the reason why the Seri ancestors died defending their land, their “territory”, the essence of their being. And this is one of the most valuable lessons to be learned by the younger Seri generations so that they can go on defending the integrity of their territory together with the conservation of its biodiversity. This would be the essence of the Comcáac culture: this is why, the “people” cannot live for long faraway from their roots, their territory: they always go back to breathe on the elements that sustain their very existence.

It is now important to clarify how the Comcáac define the “sacred”. In their culture, the “sacred” has at least two meanings: the first is used to defend their territory against the “white” invasion, hence “the whole territory is sacred” in this sense. The second has to do with the community’s private definition of what is “sacred”.

Taheöjc has an even more profound spiritual meaning: it is a sacred space since the blood of the Seris ancestors was shed when defending the integrity of the people and this territory against foreign aggression. Nevertheless, and in the elaboration of the Map of the Sites with Cultural Value for the Comcáac, one can find that in Taheöjc different type of sites could be differentiated: some of them are considered sacred since these are places where transcendental experiences take place. There are other sites with great value since they associated with great battles, war rituals or simply sheltered their ancestors. Other sites have a special value since they harbor the species upon which their survival depended. According to the western ways, all these sites are sacred together with Taheöjc impregnated by the ancestor’s blood. In the Comcáac culture though only those sites associated with transcendental rites are sacred the rest having a crucial cultural importance.

Societal role, meaning: As stated earlier, Taheöjc plays a key role in the Seri social organization, given its importance for their economic survival as well as for the symbolism it holds for their culture and beliefs. It is quite likely 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.

Secrecy Status: Not applicable

6. Current Situation

The information described below has been generated by the “Methodological Proposal for the Land Use Planning of the Comcáac territory” that was elaborated by a Comcáac multidisciplinary working team headed by Diana Luque.

Strengths

Unity of concepts such as Culture-Spirituality-Identity-Territory-Biodiversity.

Unity of concepts such as Culture-Autonomy-Self management-Legality.

Autonomous political organization, by means of a traditional government and a Council of Elders.

Productive organization based on family relations and collective access to natural resources by using “official” legal dispositions.

Cultural integration through the native language, spoken by the vast majority of Comcáac families.

High birth rates and almost null migration.

Fair nutritional conditions among the population.

Strengths that are based on national and international legislation.

Weaknesses:

The Comcáac Council of Elders has singled out the loss of traditional knowledge as the main problem faced by the Comcáac community as a whole. This results in a weakening of the sense of belonging to the Comcáac nation, which would in turn threaten the defense of their territorial integrity, the very same that was so bravely defended by their ancestors as well as the conservation of their natural resources. “Our ancestors took very good care of nature since it was their home, it was their source for food and they wouldn’t allow anybody to harm it”.¹ On the other side, the Comcáac elders point out that the education received by their youngsters is not preparing them to face and effectively tackle their precarious economic situation: “They are being left with nothing. They are in the middle. That is dangerous. There can be a lot of suffering”.

It is in this sense that the Council of Elders has established as one of its main priorities to transmit this vast traditional knowledge to the younger generations. For this, they are in the midst of creating the “Comcáac Traditional School” a space they envision as a viable environment to transmit this oral tradition since the ancient channels of oral transmission have been deeply altered or have altogether disappeared. The scheme of this “school” is a rather western concept. To support the proper functioning of this traditional school, the elders have conformed a local NGO by the name of Ctám Coyai. The three main priorities for the school are:

- Elaboration of a map for those sites of cultural use within Comcáac territory.

- Recompilation of documents/texts written on the Comcáac culture.

- Elaboration of videos capturing their songs, dances, folk stories and legends.

Although the Comcáac territory has been considered by the experts as the portion of the Sonoran Desert best preserved to date and that the community does exert a certain control upon the use of its natural resources, the Council of Elders have shown their concern vis a vis certain issues. One of them would be the strong impact that the exploitation of jaiba fisheries is exerting upon the Infiernillo Channel since they state that this activity 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 Xnoiz (the Comcáac name for this marine wheat) is a key component of their traditional diet also constituting a source of food for local marine species such as the caguamas turtles and migratory bird species. Given the influence of western ways on their everyday lives, the Xnoiz has practically disappeared from their current diet. This constitutes a vivid example of the importance of recuperating the traditional use of a natural resource that would eventually prompt the community to alter their fishing methods to lesser the impact on this key component of the local marine biodiversity.

Other environmental problems are related to the over exploitation of their natural resources. When it comes to marine resources it is a common saying that “the fish are gone, it is not any longer like it used to be. The caguama, the seven filos...”. These local assertions match the overall diagnosis when it comes to the Gulf of California general depletion of natural resources in which the Comcáac have a relatively minor responsibility.

In the case of the caguama, the alarming decreasing population rates prompted the issuing of a federal ban by the environmental authorities. This federal disposition deeply affected the Seris since this species plays a key and vital role in their ceremonies, festivities and traditional diet. Another example of species overexploitation, in this case a terrestrial one, is that of the palo-fierro. The species has been almost depleted by outsiders for the commercial production of figurines and to be used as firewood. The manual work of this wood by the Comcáac is being substituted by stone work due to the precarious status of the species. The palo fierro located in Tiburon Island is being spared for spiritual reasons.

Lastly, one of the main environmental problems affecting the Comcáac is the proper disposal of domestic trash. There is no municipal service to collect the garbage generated by the community and this accumulates around 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. Communities heavily depend on its weekly periodic supply.

The Comcáac self sufficient old economic ways have been replaced by modern monetary exchange systems. Their main resources of income rely now on fishing activities, handicrafts production, hunting permits and small “abarrotes” shops. It is this precarious economic situation that mostly threatens and elicits their cultural transformations 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 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 re-appropriation 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 Administrative Law encourages an active role of several ministries on Comcáac territory: the Government ministry, Marine ministry, Defense ministry, Environmental ministry, Communication and Public Works ministry, Public Education ministry, Agrarian Reform ministry, and the Health ministry. There is also a presence of the National Commission for Indigenous Peoples in the area.

Financial support, if any: Financial support has mainly derived from governmental development ministries from the federal through the local level (state and municipal). There is also occasional support by national

and international NGOs among them: Unidos para la Conservación, Conservation International, WWF, COBI, Red Fronteriza de Salud y Medio Ambiente and academic institutions such as the National Autonomous University of Mexico-UNAM, the University of the State of Sonora, the CIAD, Northern Arizona University and The Christensen Fund. This support has not succeeded in overcoming the poverty levels of the Comcáac communities.

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Videos: Multimedia capturing the songs, traditional folk stories associated with Comcáac sacred spaces.

Graphic materials/Visual aids: NA

8. 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 biome nature/culture.

The communities need to choose their rightful authorities always keeping in mind the respect towards the community's main beliefs.

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

The community's desire to maintain the location of their sacred sites in secret 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 survival and of a very delicate nature. This is why the community must take its time in moving forward— if so decided— with the protection of these sites.

The communities' sacred sites can be made public only with the community's prior consent.

9. Annexes (if pertinent, decrees, pertinent legislation, etc.):

- State Environmental Law.
- 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 pluricultural state.
- Mexican Agrarian Law, 106
- Mexican General Protection Law for the Environment Art. 44
- Convention on Biological Diversity, Art. 8j.

ANNEX 10

REGISTRATION TEMPLATE - 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 conform the heart of what is known as the "Sierra Tarahumara". Four of the most traditional Native American societies in North America—the Rarámuri (Tarahumara), Ódami (Northern Tepehuan), O'óba (Mountain Pima), and Warijó (Guarijío)—have their homelands here, and each of these societies has its own distinct language.

In addition, the region includes numerous communities of Spanish-speaking Mestizos, who now outnumber the indigenous residents by a factor of about three-to-one. This research will focus on the Tarahumara Indians, who call themselves Rarámuri "he/she who walks well".

Origin and significance, spiritual and cultural context: Tarahumara is only a corruption of the word Rarámuri: Tarámuri, inverted as Tarumari, thus, Tarahumara. The Rarámuri feel they are 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 it is constantly repeated by their "governors" in their sermons or nawésaris.

Indigenous and/or traditional groups involved: More than 50,000 Tarahumara Indians live in the Sierra Tarahumara's numerous canyons, 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 they subsist on very basic agriculture consisting mainly of corn and beans.

The Tarahumara are famous for running long distances. Running is so significant to them that in their own language they call themselves "Rarámuri" – those who walk well. Traditionally the Tarahumara hunted by chasing down and exhausting deer, then driving them over the cliffs to be impaled on wooden sticks.

Today they run grueling footraces of 160 km. (or more –and without stopping-) through rough canyons, kicking a small wooden ball ahead of them. A tradition of quite different sort is the tesquimada, a raucous gathering in which they consume copious amounts of tesquino, a potent corn beer.

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 northern Mexican states of Chihuahua, Sonora, Durango, and Sinaloa.

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

- Urique 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 (1760 mts) at Urique.
- Guaynopa Canyon (1620 mts) 15 km. North of El Paraja Bridge26.

Extension in Hectares: NA

Spatial classification of sacred entity: NA

3. Protection status

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

Current authority (government, community, religious or spiritual group). Historic evolution of management authority: NA

Management instruments, if any (management plan, co-management model, community agreement, land use plan, other): NA

Land tenure status: NA

Monitoring and Evaluation System (if any): NA

Relationship to formally declared protected areas or other Sacred Natural Sites: There is one national park in the proposed area, the "Cascada de Basaseachi", which protects not only the great 806 foot falls but at least five other cascades. The Park was decreed on February 2nd, 1981 and has 5,803 hectares protecting pine-oak forests as well as xerophytic shrub and grassland.

Relationship to international categories (World Heritage Sites, Biosphere Reserve, Cultural Landscape, etc.): NA

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 is also an area of great cultural and linguistic diversity. Diverse types of forests spring over 55.3 million hectares of Mexico, 28% of the national territory. These forests have great biodiversity value, produce a wide range of economic benefits, and are critical to the well being of indigenous and traditional 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 16% of the national territory (31.8 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 87 found in the United States and Canada together). Many domesticated plants of agricultural and commercial importance, including maize, 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. Threats to the region's biocultural diversity could have very nega-

tive potential consequences for areas all along the US-Mexican border.

Other: NA

5. Cultural Significance

Importance of site for indigenous and traditional communities: In a general sense – since no concrete sites have been identified as Sacred Natural Sites yet - for the Rarámuri, the Sierra Tarahumara and its canyons constitute the image of a world that has preserved the architectural design of nature itself. This is why, the Rarámuri know the secrets behind the sun, wind and water dynamics, elements to which they owe their lives. Humans, flora and fauna form part of a harmonic whole that is intimately related, that is "nature".

Societal role, meaning: The culture of the Rarámuri cannot be understood without referring to their history. Their communal experience of the past few centuries is most important in trying to understand some aspects of their lives today and of their attitude towards the white man, the "chabochi", whose victim they have always been.

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 pariahs. As conquered peoples, they had no rights and were treated as such. Although military force was used to subjugate 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 implied working in the mines which was hard for them since this entailed penetrating into the bowels of the earth, near the place were Reré Beteáme, he who lives below is found, in contrast to Repá Beteáme, 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 reward, some pinole or beans and tortillas are shared, but the principal attraction of these endeavors is tesquino – batari – their 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 according to their cultural 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 siríames, more than definitions and concepts, is the connection between life and teachings: in other words, they do not know how to verbalize 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 so as to simplify communications, but they only succeeded in convincing them to hold their meetings at the church, which they called the village. Having thus organized them, the missionaries also exercised great influence as regards the offices and religious rites which exist down to the present in Rarámuri communities.

The principal office is that of the Governor, the siríame 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 siríames are elected by consensus, and the Rarámuri always choose the most upright and prestigious individual in the community. These do not lead by following a personal standard, but rather by following a communal agreement. In order to comply with his duties the siríame counts on the assistance of multiple subordinates: generals, captains, mayors, constables, foremen, chapeyones, abanderados, tenanches and resaderos (the last four being personages of the fiesta). These posts which vary from one village to another 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 lucre. 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 as long as the community is satisfied with the manner in which their duties are discharged.

The owirúame or healer/chaman 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 owirúame, under whose keeping is placed at a very young age. These priest-doctors have their own specialties. Some sing only at rutuburi or yúmari dances, others only at jícuri healing feasts. They all conscientiously fast and pray, complying with the demands of the gods who impose restrictions and abstinence and they are therefore called

“righteous men” (owirúami). 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.

Secrecy Status: NA

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 southwestern Chihuahua, and tourism development, especially around the Copper Canyon, is proceeding at a rapid pace mainly due to the promotion of the Copper Canyon Railway Route. A network of paved roads, constructed to promote tourism and to facilitate the extraction of the region’s natural resources, now extends across much of the Sierra. These activities have displaced indigenous peoples from their lands, disrupted local ecological relations, and contributed to severe deforestation, soil erosion, drought, loss of many understory plants, and the extinction of several endemic animal species, including the Chihuahuan grizzly and the Imperial woodpecker, the largest woodpecker in the world. Sierra residents are seeing their livelihoods under threat, and rapid change is also endangering their traditional knowledge, the languages that are the vehicles of this knowledge, and the cultural traditions that sustain their identity.

Government and NGO involvement: The Mexico-North Research Network is actively present in the area. This Network is an international consortium of universities, museums, research institutes, and cultural centers that share an interest in southwestern United States and northern Mexico and a desire to collaborate on projects focused on this region. Through this network, a binational (US-Mexican), multidisciplinary, and multicultural research project—the Project on Diversity in the Sierra Tarahumara Diversity (PDST)— is being developed to document and explore the linkages among the region’s biological, cultural, and linguistic diversity. The project will also assess the impact of commercial activities such as forestry, mining, and tourism on the region’s environment and residents.

Currently, twenty-eight institutions are members of the Mexico-North Research Network. They are, in alphabetical order: The Alameda (San Antonio, Texas); Centro de Investigaciones y Estudios Superiores en Antropología Social (Mexico City, with centers throughout Mexico); Hampshire College (Amherst, Massachusetts); Instituto Cultural Mexicano (San Antonio, Texas); Instituto Tecnológico y de Estudios Superiores de Monterrey, Campus Chihuahua (Chihuahua, Mexico); Northern Arizona University (Flagstaff, Arizona); Our Lady of the Lake University (San Antonio, Texas); Smithsonian Institution (Washington, D.C.); Sul Ross State University (Alpine, Texas); Universidad Nacional Autónoma de México (Mexico City and San Antonio, Texas); The University of Arizona / Arizona State Museum (Tucson, Arizona); University of New Mexico (Albuquerque, New Mexico); University of North Texas (Denton, Texas); and The University of Texas System, including its nine campuses at Arlington, Austin, Brownsville, Dallas, El Paso, Edinburg (Pan American), Odessa (Permian Basin), San Antonio, and Tyler and its six medical centers in Dallas, Galveston, Houston (2), San Antonio, and Tyler.

Financial support, if any: At present, current sponsors for the PDST project are Smithsonian Institution’s National Museum of Natural History (NMNH), the Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO), the Centro de Investigaciones y Estudios Superiores en Antropología Social (CIESAS), the Berkeley Museums of Natural History (University of California, Berkeley), the Instituto de Ecología, A.C., and the non-profit organizations Mexico-North Research Network and Terralingua: Partnerships for Linguistic and Biological Diversity.

7. Information Sources

References/Bibliography: NA

Videos: NA

Graphic materials/visual aids: NA

8. Lessons learned that might help other Sacred Natural Sites managers: According to the research conducted by the Mexico-North Research Network, threats to the Sierra Tarahumara’s biological, cultural,

and linguistic diversity (“biocultural diversity”) are part of a global crisis. Increasing numbers of scholars in a variety of disciplines are recognizing the urgency of understanding the relationships among the diverse manifestations of life around the world and identifying the consequences that transformations in these relationships will potentially have on the future of humanity. They also are realizing that biological diversity is much more closely tied to cultural and linguistic diversity than previously thought.

Although the negative impact of humans on the environment cannot be ignored many societies have developed strategies that protect and promote biological diversity and the landscapes within which they live. These strategies are based on sophisticated interpretations 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 coevolution and that the causes and consequences of declining diversity in one area is directly related to those in others.

9. Annexes (if pertinent, decrees, 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 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 pluricultural state.
- Mexican Agrarian Law, 106
- Mexican General Protection Law for the Environment Art. 44
- Convention on Biological Diversity, Art. 8j.

ANNEX 11

REGISTRATION TEMPLATE - 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:** “Tam bokom mim” or “Teopam” (Tenek Denomination)

Origin and significance, spiritual and cultural context: The Sacred Caves of the Wind and Fertility were decreed as Sacred Natural Sites due to their importance for the Tenek, Nahuatl and Pames 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 take place. They also represent the space where the shamans or traditional indigenous doctors seek enlightenment to heal the sick and where the parteras’ invocations ensure a safe pregnancy for those expecting a child. These caves do belong to a more extensive network of rocky formations, spring sources, cavern and coves that, all together, perform a central role in the cosmology of the Huasteca Indigenous peoples.

The Wind and Fertility caves are located within a relict 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 shamans.

Indigenous and/or traditional groups involved: Indigenous groups of the Huasteca region of the State of San Luis Potosí: Tenek, Nahuatl and Pames. These are scattered throughout a geographic area that encompasses 18 municipalities though most of the population (approx. 168,072 individuals, 46.5 % of the total Huasteca population) is located in 13 municipalities, those of San Martín Chalchicomula, Tamazunchale, Tampacán, Tampamolón, Tancanhuitz, Tanlajas, Xilitla, San Antonio, Matlapa, Aquismón, Ciudad Valles Coaxtlán and Huehuetlán. The 5 remaining municipalities encompass a total of approx. 6,616 individuals in Tamuín, San Vicente Tancuayalab, Tamasopo and 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 Huichihuayán, municipality of Huehuetlán, 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 Chununtzen Ejido. 99 00 ó 99 07 latitude

North and 21 47 o 21 50 longitude West. Both caverns are located on the same slope, one above the other, separated approx. 20 meters from each other, their entrances aligned in the same vertical. It is widely assumed that both caves are connected creating a system of caverns probably associated with the Huichihuayan river system.

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 out of it due to changes in atmospheric pressure. Its entrance, an ellipse 3,0 m width and 1,30 m high, leads to a hall that gives way to diverse pathways leading to other chambers. The main hall displays two levels united by a mud ramp and a variety of ritual objects are scattered randomly. Votive candles are to be seen everywhere especially on top of rock formations together with copal burners, "papatla" leaves covering the food 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 possible by a series of wooden stairs. Upon reaching the entrance one descends to the cave's main chamber. It is in this hall that the main rituals are performed by the side of the largest column in the chamber. This rocky formation is known as the "Goddess 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 decreed as Sacred Natural Sites.

Current authority (government, community, religious or spiritual group). Historic evolution of management authority: At present, a commission of local traditional doctors' representatives – local denomination for chamans and healers - is being conformed. This commission will in turn choose the local representatives 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 doctors Commission.

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 but the lack of economic resources put a halt to its successful conclusion. Some of the key components of this management plan are: (i) the selection and creation by traditional doctors of a Surveillance Committee with the mandate to familiarize visitors with the sacred nature of the site. This change in attitude would in turn seek to reduce the amount of litter concentrated inside the caves; and (ii) the importance of respecting the established access routes to the caves, putting a halt to the acts of vandalism upon the rock formations in the caves (columns, pillars, etc) as well as the stealing of votive/ritual offerings by outsiders.

Land tenure status: The area where the caves are found was donated by its owner to the state government due to his interest in cooperating with the protection of this sacred space.

Monitoring and Evaluation System (if any): NA

Relationship to formally declared protected areas or other Sacred Natural Sites: The caves were decreed as Sacred Natural Sites together with Wirikuta, the sacred space of the Huichols in the northwestern portion of the state. The caves belong to a more extensive sacred landscape conformed by the Huastecan karst, which is dotted with a large number of caverns and subterranean systems. The caves belong to the State's Network of Protected Areas encompassing a total of 19 sites.

Relationship to international categories (World Heritage Sites, Biosphere Reserve, Cultural Landscape, etc.): The "Abra Tanchipa Sierra Biosphere Reserve", also in the Potosino Huasteca region, is approx. 60 km. away. Abra Tanchipa was declared a protected area back in June 6th, 1994 and amounts to a total of 21,464 has. 16,920 of which are found in the core zone. The "Sierra Gorda Biosphere Reserve" is located approx. 30 km. away from the caves in the neighboring state of Queretaro.

4. Environmental Significance

Ecosystem Type/Uniqueness: Tropical Forest/Veracruzana Tropical Forest according to WWF's ecoregions. The caves are located in a relict of tropical forest in an almost pristine state. Some representative tree species are the ojite, the cafetillo, the chaca, the higuero and the jalamate. 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 in this context then 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 desolation. 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 in 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.

Priority Terrestrial Region – CONABIO: Yes

Hydrological Terrestrial Region – CONABIO: Yes

Type of vegetation (primary, secondary): the caves are an island of primary vegetation in an otherwise highly degraded environment.

Degree of conservation: Very good

Watershed protection: The presence of two spring sources at the foot of the caves is of great environmental and economic importance: one of them is the source of drinking water for the villages of Huichihuayan, Chununtzen I, and the neighboring communities. The other source, although seasonal, is of crucial importance for the cattle grazing and agricultural activities of the area.

Other: Caves' ecosystems are among the least studied and protected worldwide. Its conservation and that of those species associated with them is another plus derived from the protection of this area.

5. Cultural Significance

Importance of site for indigenous and traditional communities: In the Huasteca region, the caves identified for ritual use are scattered around the slopes and Sierras of Huehuetlán and Aquismón, together with the Huichihuayan Sierra where the caves of the Wind and Fertility (Tam bokom mim according to the Tenek) are found. It is in the vicinity of these caves that one can also find the caves of "La Mascara-The Mask" and "Can-ja", together with those associated with the source of the rivers Huichihuayan and Coy, all of them relatively close to one another. Other caves worth mentioning are La Ventana (the Window) - easily identified from the federal highway in the setting sun - and the Caves of Hornos.

Of all the caves mentioned above, those of the Wind and Fertility (Tam bokom mim) referred to as the "Teopam" (Sanctuary) by their indigenous users - a denomination that would include the caves per se and its surrounding habitat – are the most important according to the cosmivision of the region's indigenous peoples.

These caves or caverns have been used by the Huasteca indigenous peoples for centuries now. The caves are the spaces where Teneks, Pames and Nahuas concur to perform the rituals that sustain their social and religious lives. They are vital to ensure the survival of the essence of these peoples culture. If one could compare them to modern western universities, one could venture that these sites perform a similar role since they are the sites where traditional knowledge is passed on from one generation to another, from "chest to chest". There are at least thirteen rituals performed in these caves.

There are many myths and legends associated with these caves. One of them warns visitors that trespassing the hall entrance of the Cave of the Wind without having observed sexual and meat abstinence for 7 days prior to the visit, would provoke the cave's spirits to blow such a strong wind that it would block the entrance to the cave to those not observing this rule. In the Cave of Fertility those entering the cave without observing this precept will get lost and trapped forever inside the cave.

Other myth states that if food is not offered or incense is not burned when entering the caves, one can experience visions of the giant vipers watching the entrance to both caves. Other myths and legends associated with the cave systems of the Huichihuayan and Aquismón Sierras, such as La Ventana Cave, state that the Thunder God lives in the cave and that those going through its entrance will heal immediately from their maladies. There are other legends associated with the source of the Coy and Huichihuayan rivers' caves.

Societal role, meaning: *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 cosmovision are reproduced. Each stone, tree and each natural element associated with the caves and their surroundings is a representation of the fundamental building blocks of their religious cosmovision.*

Secrecy Status: *Not Applicable*

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 forest 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 depleted by poaching.*
- **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 forest.*
- **Trash/Garbage disposal:** *Both visitors and 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 damage their structures with graffiti or by breaking the columns and pillars in their interior.*

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

- **Abundance of access paths:** *There are various alternative paths accessing the caves that have a severe impact upon the surrounding ecosystem.*
- **Stealing votive offerings:** *Visitors who are ignorant of the sacred rituals performed in the caves harm or steal votive offerings. 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 rites and beliefs is of crucial importance. In addition to the above list of threats, the uncontrolled development of infrastructure (especially roads) and the continuing progress of the agricultural frontier encroaching these last relicts exert a sense of urgency that utterly worries 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 “Foundation Eduard Seler” for the historic and anthropological research is carrying out a project to booster the Huasteca culture that includes signing of an agreement to recuperate one of the most important archaeological sites of the region, El Consuelo in the village of Tamuin.*

Financial support, if any: *In the spring of 2001, the Trust Fund for the State Network of Protected Areas of the state was created. Current efforts are concentrated in fundraising strategies that will allow the Fund to finance the maintenance of this and other protected areas in the state. The Fund was initiated with a seed capital of USD80,000.*

7. Information Sources

References/Bibliography: *Not included*

Videos: *NA*

Graphic materials/visual aids: *NA*

8. Lessons learned that might help other Sacred Natural Sites managers: *Managing indigenous sacred sites requires a process where respect towards “other ways of being/existing” – the cultural difference from others- must exist in order to reconcile the various ways of understanding life and nature. Western society’s traditional management ways must then become flexible and permeated with this premise to be able to validate and understand traditional indigenous management and protection systems.*

9. Annexes (if pertinent, decrees, pertinent legislation, etc.):

- *San Luis Potosi environmental legislation.*
- *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 pluricultural state.*
- *Mexican Agrarian Law, 106*
- *Mexican General Protection Law for the Environment Art. 44*
- *Convention on Biological Diversity, Art. 8j.*

