



MEDIUM-SIZED PROJECT PROPOSAL REQUEST FOR GEF FUNDING

AGENCY'S PROJECT ID: GM-P098732

GEFSEC PROJECT ID: 2896

COUNTRY: Mexico

PROJECT TITLE: Sacred Orchids of Chiapas: Cultural and Religious Values in Conservation

GEF AGENCY: World Bank

DURATION: 3 years for project implementation

GEF FOCAL AREA(S): Biodiversity

GEF OPERATIONAL PROGRAM(S): OP4 Mountain Ecosystems; OP3 Forest Ecosystems

GEF STRATEGIC PRIORITIES: **Biodiversity Strategic Priority I. Catalyzing Sustainability of Protected Areas Systems:** (a) Demonstration and implementation of innovative financial mechanisms and (c) Catalyzing community-indigenous initiatives. **Biodiversity Strategic Priority II. Mainstreaming Biodiversity in Production Landscapes and Sectors:** (b) Developing market incentive measures

ESTIMATED STARTING DATE: January 2007

IMPLEMENTING AGENCY FEE:

CONTRIBUTION TO KEY INDICATORS OF THE BUSINESS

PLAN: The project will contribute to strengthening the subregional Protected Areas (PA) system by establishing partnerships with landowners to secure a more effective long-term conservation of 286,486 hectares (167,309 hectares in La Sepultura Biosphere Reserve and 119,177 hectares in El Triunfo B.R.) included in the global priority lists: the Central America Pine-Oak Forest Ecoregion, the Sierra Madre del Sur Pine-Oak Forest Ecoregion and the Chiapas Central Depression Dry Forest. The landowners are indigenous and peasant communities who will benefit from extractive reserves while providing buffer areas for conservation. The project will develop a legal framework to enable certified trade of non-timber forest products (NTFP) for ritual use. The project's local partners, in coordination with the Alliance of Religions and Conservation (ARC), will involve religious groups to replicate the approach. Some 300 palm producers and over 400 collectors will receive training to improve their families' livelihoods by creating nurseries, community botanical gardens and new community protected areas.

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT:

Claudia Grayeb Bayata, Director of Financial International Organizations, Ministry of Finance (Secretaría de Hacienda y Crédito Público)

Date: August 4th, 2005

This proposal was prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for a Medium-sized Project.

Steve Gorman
Executive Coordinator

Jocelyne Albert
Tel. and email: (5255) 5480-4266
jalbert@worldbank.org

Date: September 6, 2006

FINANCING PLAN (US\$)	
GEF PROJECT/COMPONENT	
Project	949,981
PDF A approved Sep 26, 2005	50,000
SUB-TOTAL GEF	999,981
CO-FINANCING (project implementation only, PDF and preparation counterparts no included).	
Federal Government	325,769
Municipal Governments	80,000
NGOs Pronatura Chiapas	227,308
TNC	173,452
ARC	120,000
Other	176,832
<i>Sub-Total Co-financing:</i>	<i>1,103,361</i>
<i>Total Project Financing:</i>	<i>2,103,342</i>
FINANCING FOR ASSOCIATED ACTIVITY: Pronatura Chiapas Environmental Enterprises Fund (500,000 USD) will facilitate access to small credits if needed.	

LIST OF ACRONYMS

ARC	Alliance of Religions and Conservation
B-friendly	Biodiversity-friendly
CAS	Country Assistance Strategy
CBD	Convention on Biological Diversity
CEC	Commission for Environmental Cooperation
CEPIC	Pronatura Conservation Information Center
CDI	National Commission of Indigenous Peoples
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CLAI	Latin American Council of Churches
CONANP	National Commission of Protected Natural Areas
CONABIO	National Commission for the Knowledge and use of Biodiversity
COINBIO	Project for Biodiversity Conservation by Indigenous Communities in the States of Oaxaca, Michoacan and Guerrero, Mexico
CONAFOR	National Forestry Commission
ENRP	National Environment and Natural Resources Program
FSC	Forest Stewardship Council
GEF	Global Environmental Facility
ICCR	Interfaith Center for Corporate Responsibility
MIC	Mexican Interfaith Council
MSD	Multi Stakeholders Dialogue
MSP	Medium Sized Project
NOM	Mexican Official Standard
NTFP	Non-timber forest products
PA	Protected Area
PDF-A	Partnership Development Fund (A or B)
PES	Payments for Environmental Services
PET	Temporary Employment Program
PROCyMAF	Project for the Conservation and Sustainable Management of Forest Resources in Mexico
PRODERS	Regional Sustainable Development Program
PROFEPA	Mexican Federal Environmental Protection Agency
PPSA	Program for Environmental Services Payment
SEMARNAT	Ministry of the Environment and Natural Resources
SEPI	State Secretary for Indigenous Peoples
UMA	Wildlife Management Units
UACH	University of Chapingo
UNACH	University of Chiapas

PART 1. PROJECT CONCEPT

A. PROJECT SUMMARY

Rationale

Religious practices in many parts of the world are linked to the use of wild species that are collected for ceremonial purposes. In the southern Mexican state of Chiapas, various species of bromeliads, palms, orchids and cycads are collected for use by traditional indigenous religious groups as well as by Christian churches, both locally and internationally.

In terms of biological diversity, Chiapas is the second most important state in Mexico; there ceremonial plants are found in forested areas (including cloud forests, tropical mountain forests, pine-oak forests and dry forests); in buffer zones and core areas of biosphere reserves (La Sepultura and El Triunfo); and in one of the least protected ecoregions in Mesoamerica, the Central American Pine-Oak Ecoregion. The project will develop strategies for managing and conserving the wild populations and habitats of some of the relevant species, including at least one in each of the following groups: Bromeliads (*Tillandsia guatemalensis*, *Tillandsia eizii*), Palms (*Chamaedorea quetzalteca*, *Ch. ernesti-agusti*, *Ch. Oblongata*), Orchids (*Oncidium leucochylum*, *Lealia superbiens*), and Cycads (*Dioon merolae*). The conservation of these habitats will contribute to conserving a whole set of globally significant biological diversity found in Chiapas.

Approximately 150,000 bromeliads are collected annually for ceremonial purposes: more than 600 cycads are impacted by Mexico's May 3 celebration; nearly 1000 orchids are used during the Christmas season and for the celebration of La Calendaria on February 2; and more than 80 tons of *xate*¹ palm of the genus *Chamaedorea* spp. are exported annually from Chiapas to the United States, where an estimated of 300 million palms are imported annually, with 37% of the demand concentrated during the Holy Week for use by Christian congregations. Churches spend over 27 million US dollars every year on palms alone.

The project aims to mobilize religious congregations and traditional community organizations in favor of biodiversity conservation to achieve concrete action for the sustainable management of species of global interest. It proposes to do so while conserving the habitats where these species are naturally found, thus broadening the benefits of conservation.

The project strategies include: raising awareness among the religious groups of the Maya Tzotzil indigenous communities as well as among Christian congregations; and training communities and strengthening local grassroots organizations in sustainable management of the species and their habitats. The project will support increased social participation and involvement at all levels of management and conservation of species, and will implement *in situ* conservation mechanisms, such as community botanical gardens and extractive reserves. With regard to the palms of the genus *Chamaedorea* spp., the project will also focus on strategic interventions that will result in the creation of sustainable markets, thereby increasing the social and economic benefits to the rural communities and protecting the habitat ecology. The project will support improvements in: management of *Chamaedorea* species and their habitat; palm leaf classification; and commercial contracts and agreements with Christian churches (specifically Lutherans) to promote fair and sustainable palm trade.

Ultimately, the Chiapas project will seek to demonstrate the economic and conservation benefits of linking religious and cultural values to biodiversity conservation, while securing the provision of plants for religious purposes, analyzing the potential for scaling up such an approach to the national level and deriving lessons for the global work of the Alliance of Religions and Conservation (ARC).

¹ Throughout the document, the term *xate* or *camedor* palm is used to refer to the various species of the genus *Chamaedorea* spp.

Project Development Objective

Reduced pressure on endangered forest species used for religious ceremonies and improve livelihoods of local communities and partnerships with religious groups

Global Environmental Objective

Areas under sustainable management and protection status increased, in sites of ecoregions of global importance in Chiapas.

Intermediate Results

1. Legal national framework and knowledge for management improved for the conservation and sustainable use of NTFP of ritual and ceremonial value.
2. Indigenous communities and rural peasants' capacity and organization strengthened for sustainable harvesting of NTFP and conservation of habitats.
3. International and national religious groups, communities and other stakeholders partnerships developed for sustainable consumption of forest species.

Project components:

1. Knowledge management for the conservation of species used in ceremonies
2. NTFP Cultural Participatory Management Plans²
3. Partnership building with religious groups for conservation and the promotion of fair markets
4. Project management, monitoring and evaluation

The project will develop a model of effective partnerships among faith groups—at the local, national and international levels—and indigenous and rural communities to foster conservation of biological and cultural diversity. ARC's participation as a partner in the project will promote its replication and sustainability. In this regard, ARC will share experiences gained in working with religious groups on conservation projects; at the same time, the project will increase ARC's capacities in biodiversity conservation and in involving people of faith through lessons learned.

Expected Project Outcomes	Indicator
- Non-timber forest species used for religious and symbolic purposes managed sustainably	- Enabling legal and technical framework in place
- Indigenous communities and rural peasants empowered	- Fair-trade and b-friendly certified production established
- Religious and traditional sectors committed	- Communities and peasants actively participating in decision making
	- Efforts are yielding social and economic benefits
	- Religious and traditional sectors are increasing their demand for b-friendly fair-trade certified products

	#	Expected Project Outputs
<u>Non-timber forest products</u>	1	- Model strategy and knowledge management program to develop Cultural Management Plans for NTFP of Ritual Use in collaboration with religious communities
	1	- Model partnership of religious congregations working for nature conservation, for replication by ARC
	4	- Technically robust proposals for adequate regulation
	1	- Improved institutional coordination
<u>Bromeliads</u>	10	- Propagation areas established in coordination with religious traditional leaders in forest areas within the municipality of S. J. Chamula
	1	- Harvesting and compensation agreement established with landowners

² Cultural Management Plans are based on an integrated approach, including technical and cultural practices, to promote natural resources management and social development as a whole.

	800 1 1 100	- Has. of Sacred Site/Extractive Reserve for NTFP of Ritual Use established on the Tzontehuitz volcano - Community/Municipal Botanical Garden - Community/Municipal Nurseries for reforestation - Fuel-wood Saving Stoves built under firewood management subprojects
<u>Chamaedorea palm</u>	6,000 55,000 75% 300 25% 1 25% 80% 1	- Has. of palm under best management practices - Has. under enhanced protection in Biosphere Reserve (El Triunfo and/or La Sepultura) areas under community agreements to limit palm recollection - Reduction in waste, with consequent increase in income and reduction in collection demands - Individuals (some 180 families) trained and participating - Increase in family income of participant groups through best-management practices, reduced waste and quality control carried out by the communities - Regional palm producer organization established to increase sustainable management and b-friendly fair trade - Of yearly palm production bought by churches through established marketing agreements, including - Of Holy Week season production realized in project communities - Agreement established with a Biosphere Reserve to limit collection areas and allow for the recovery of wild populations
<u>Orchids</u>	400 1 50 1	- Has. protected through the establishment of 1 extractive reserve - Community botanical garden to add value (through tourism) - Fuel-wood saving stoves and firewood management subprojects - Training facility for nurseries and botanical gardens
<u>Cycads</u>	900 300 3,000 4	- Has. protected through the establishment, with municipal support, of a conservation area and an extractive reserve in Cerro Nambiyugua - Traditional collectors aware and trained in sustainable harvesting - Has. of cutting areas established with new harvesting practices that do not damage plants - Community nurseries established (1 per community)

B. COUNTRY OWNERSHIP

Country Eligibility

Mexico signed the Convention on Biological Diversity (CBD) in 1992 and ratified the CBD in March, 1993; it joined CITES in 1991.

Country Commitment

1. Project linkage to national priorities, action plans and programs

Mexico's National Strategy for Biodiversity includes the following activities:

- a) **Protection and conservation** to restore and preserve, in both quality and quantity, the greatest possible range of biological diversity and to reduce the negative impact on biodiversity as much as possible.
- b) **Valorization of biodiversity** to establish guidelines for policies that Mexican society should adopt to ensure appropriate appreciation of the importance of the existence and conservation of biodiversity.
- c) **Knowledge and information management** to recover, protect, and systematize both modern and traditional knowledge, which in turn will facilitate decision making related to the protection, conservation, and sustainable application of biodiversity.

- d) **Diversification of the uses of biodiversity** to ensure the continuity of sustainable practices, reduce unsustainable ones, and diversify the uses of those elements of biodiversity that already provide income and employment.

Mexico's 2001-2006 National Plan for the Environment and Natural Resources states that achieving integrated management of natural resources and sustainable development within the current model of environmental management requires: (a) promotion of the recognition of the economic and social values of natural resources, and (b) participation by civil society (for example NGOs, the private sector, and academic institutions) in the formulation and implementation of policies and programs. Mexico's Strategic Forestry Plan to the year 2025 includes the development of non-timber forest resources; in Section 5.5.2 it states that: "non-timber forest products and traditional knowledge related to them offer possibilities for both improving resource conservation and promoting their sustainable management." The National Commission for the Development of Indigenous Peoples has established a Program of Productive Agro-ecology, which involves the recovery and conservation of genetic material pertaining to flora and fauna species that are of interest to indigenous communities (for ritual, medicinal, or dietary use). The program also encourages indigenous communities to manage their natural resources by integrating their own traditional practices with modern technologies, according to their culture.

C. PROGRAM AND POLICY CONFORMITY

1. Program Designation and Conformity

The project responds to **OP4 Mountain Ecosystems** objectives:

- Conservation or *in situ* protection of biodiversity, contributing to the effective protection of systems of conservation areas, focusing on the Mesoamerican region; and
- Sustainable use and management of mountain ecosystems combining productive, socio-economic, cultural and conservation goals on and around reserves through various forms of community and inter-institutional agreements.

Conservation and sustainable use will be achieved in the Chiapas State mountain ecosystems, which are identified as priorities within the National Biodiversity Strategy and the WWF Global 2000 Priority Areas for Conservation, resulting in complementary, representative coverage of habitat types under management and protection in Mexico.

Successful outcomes will be replicated through the ARC network on the basis of the experience and knowledge gained, balancing human needs and biodiversity conservation with the committed participation of people of faith and their organizations.

The project is also significantly contributing to **OP3 Forest Ecosystems** objectives:

- Conservation *in situ* through the protection of primary/old-growth and ecologically mature secondary forest ecosystems by strengthening systems of conservation areas, focusing on pine-oak ecosystems in areas at risk; and
- Sustainable-use forest management combining production, socio-economic, and biodiversity goals.

The project focuses on the management of species under substantial pressure from harvesting for use in traditional celebrations and religious practices. The high symbolic value of these species offers an important opportunity to involve religious and traditional indigenous social structures in the development of conservation strategies and creates incentives for protecting the forest habitats of these imperiled species.

The project complies with the main strategic considerations guiding GEF-financed activities to secure global biodiversity benefits by: integrating conservation and the sustainable use of biodiversity within community cultural management plans; mobilizing religious congregations to help develop fair

markets, which in turn contribute to the sustainability of local efforts to manage and conserve critical habitats; integrating efforts to achieve global benefits in the cross-sector area of deforestation; developing an approach that includes representative ecosystems within the PA system and of global biodiversity significance; and targeting the design to help Mexico achieve the objectives of its CBD biodiversity strategy in a culturally appropriate, socially inclusive and sustainable, cost-effective manner.

The project was conceived under **GEF Biodiversity Strategic Priorities 1 and 2:**

1. Catalyzing sustainability of protected areas through demonstration of, capacity building in and implementation of innovative trade agreements that will contribute to catalyzing community/indigenous commitment to Cultural Management Plans, promoting economic benefits, sustainability and the expanded protection of PA by reducing the pressure exerted by wildlife collectors.

The partnership with ARC will contribute to generating awareness among organized communities and removing barriers to their participation in direct trade agreements with religious congregations to increase the demand for b-friendly, fair-trade certified NTFP.

2. Mainstreaming biodiversity in NTFP extractive reserve landscapes and within religious sectors in Mexico and abroad through global collaboration and trade networks; and developing market agreements that will increase peasants' income and the value of conserving their forests through the sustainable management of extractive reserves.

This demonstration initiative, thanks to the support provided by ARC and the religious partners, will provide assistance to organizations of people of faith in the region and beyond to expand market incentives and facilitate replication.

2. Project Design

The use of flora species for religious and traditional ritual purposes is a widespread practice in Mexico and other parts of the world. It is generally related to the decoration of altars and sacred sites, and demand depends on the ritual calendar.

In Mesoamerica and the Mayan and Zoque regions of Chiapas in particular, the 4 most widely used groups of species in indigenous and Christian rituals are bromeliads, palms, orchids, and cycads, in addition to hay, moss, and resins such as copal. Furthermore, large quantities of *xate* palm are collected from the wild, from tropical mountain rainforests, for sale; a large part of the market for this palm is found in the United States, responding to the demand from churches for wedding, funeral and Holy Week decorations.

The sustainable and culturally integrated management of populations of these groups of species will promote biodiversity conservation and protect remnants of their habitats, which are globally significant ecosystems (tropical mountain cloud forests, tropical rainforests, and temperate pine-oak forests). The project will contribute to the conservation of the Mesoamerican Pine-Oak Forest Ecoregion, one of the 200 global ecoregions identified by the World Wildlife Fund, which is located within the Northern Mesoamerican Hotspot described by Conservation International. The Mesoamerican Pine-Oak Global 200 Ecoregion is the richest subtropical conifer forest in the world. Specifically, the project will contribute to the conservation of the Central America Pine-Oak Forest and the Sierra Madre del Sur Pine-Oak Forest, as well as the conspicuous Ecoregion of the Chiapas Depression dry forest. (Annex 3, Map 1)

The project will explore the relationship between religious practices and biodiversity. Given the importance of sacred plants to the various cultures, the participation of traditional and religious groups is strategic for the conservation of wild populations and natural forests that contain this globally significant biodiversity; it is also strategic for the maintenance of local cultures. The expected success of the project is based on the hypothesis that symbolic values can mobilize sectors with previously

limited involvement in biodiversity conservation; in particular, religious congregations and traditional community organizations can be involved in developing a set of non-monetary incentives that could be applied for conservation. In the case of palms, the mobilization of national and international religious congregations also is expected to help in the development of fair markets, which in turn will contribute to the sustainability of local efforts to manage and conserve critical habitats.

The proposed approach is fully consistent with cultural dimensions of NTFP use by the population for ritual, ornamental, dietary or medicinal purposes, and therefore is linked to the survival of local culture and traditional knowledge as defined in the CBD under Article 8 (j). The project will break ground in this field in Mexico and will set an example for other parts of the world by developing concrete examples of conservation and related tools based on work with religious congregations and traditional organizations.

In Chiapas the project will work with the indigenous Maya Tzotzil and peasant communities that collect these species, whether for their own use or for sale. Furthermore, the project will promote the participation of Christian religious congregations from Mexico, the United States and Europe for the creation of fair and sustainable markets. The project will support linkages between the various stakeholders and will facilitate the allocation of resources to joint strategies, thus increasing impact and institutional coordination.

The project team has confirmed that the main stakeholders are willing to participate. Consultations have been carried out with the counterpart organizations and most stakeholders have already participated in various stages of the preparation of the current project proposal. The project will further seek the involvement and active participation of traditional leaders and religious groups in raising conservation and environmental awareness among their constituencies.

One of the main project partners is ARC, a worldwide network of 11 faiths that promotes participation by religious groups, based on their own traditions and beliefs, in environmental projects. This network provides valuable lessons in approaches to working with religious leaders. ARC will support the establishment of links with religious congregations, thereby helping them to acquire new experience that can be applied through the network in various social and ecological settings throughout the world.

The work program includes three main components. The first involves analyzing the status and uses of selected species and promoting strategies and practices for sustainable harvesting in and management of their natural habitats. The second focuses on fostering the participation of local and indigenous communities in these efforts, and on strengthening their capacity to manage these resources through measures that include small grants to develop local sub-projects for sustainable harvesting, propagation and conservation of relevant species. The third component will build partnerships and alliances with religious groups, particularly for the promotion of fair and sustainable markets for species with existing commercial value.

a. Current Ecological Situation of Selected Species, and Social Context of Indigenous and Peasant Communities

i. Ecological Significance

Mexico is a mega-diverse country, host to at least 10% of all the biodiversity on Earth (Mittermeier and Goettsch, 1992³). In particular, the state of Chiapas, in southern Mexico, is extremely rich in biological and cultural diversity, with over 8,000 species of vascular plants—representing almost one third of all plants and more than half of higher plants—and 19 vegetation variations under major ecosystems, such as deciduous forests, cloud forests, tropical rainforests, and mangrove swamps.

³ Mittermeier, R. and C. Goettsch. 1992. “La importancia de la diversidad biológica de México”, in CONABIO, *México ante los retos de la biodiversidad*. México, pp. 57-62.

Table 1. Species selected for the project

Species	Habitat	Status
Bromeliaceae <i>Tillandsia eizii</i> <i>Tillandsia guatemalensis</i>	Mature pine-oak forests of the Central American Pine-Oak Ecoregion	Endemic to Chiapas and Guatemala. The situation of the plant populations is unknown.
Chamaedorea <i>Chamaedorea quezalteca</i> <i>Ch. ernesti-agustii</i> <i>Ch. Oblongata</i>	Subtropical coniferous forests of the Sierra Madre de Chiapas Ecoregion. Tropical rainforests of the Veracruz-Peten moist forest	Threatened. NOM-059-SEMARNAT-2000
Orchidaceae <i>Laelia superbiens</i> <i>Oncidium leucochylus</i>	Oak forests of the Central American Pine-Oak Ecoregion	Endemic to Chiapas, Guatemala, Honduras. CITES II, <i>Oncidium leucochilium</i> (Tanal), <i>Laelia superbiens</i> (Candelaria): Threatened. NOM-059-SEMARNAT-2001.
Cycads <i>Dioon merolae</i>	Dry tropical forest of the Chiapas Central Depression Ecoregion	Endemic to Chiapas. Endangered (IUCN, 1997). NOM-059-SEMARNAT-2001.

(See Project Location and Ecological Significance in Annex 6, Environmental Assessment.)

The selected species depend on specific ecological conditions for the health of their populations. The sustainable management of the species will, therefore, also promote the conservation of their habitats.

In the case of bromeliads, these species require mature, old-growth oak forests. The inflorescence, which is collected before the seeds spread, requires 6 to 15 years to reach maturity. Traditional collectors are not aware of the life cycle of the species and often over-exploit these resources.

The selected *Chamaedorea* species exist only in the wild and require the shade of tropical rainforests and cloud forests to grow in good quantities and maintain their breeding capacity. Recent studies show that the population demography of these species has been affected by collecting practices, reducing the size and the reproductive performance of the plants. A similar situation exists with the cycad populations, which are endemic to Chiapas and depend on the soil and other ecological features present in dry forests.

The orchid *Laelia superbiens* is found in old-growth oak forests. It requires specific conditions of wind, light and humidity, which is the reason for its scattered distribution within the forest.

It is important to mention that the current knowledge concerning the status of wild populations of many species in these groups and genera is not adequate to reliably assess the degree to which they are threatened.

ii. Economic and Social Importance

Among the local populations, the four selected groups of species have varying degrees of economic and social importance. Most non-timber species fetch low prices on the market and it is generally the poorest people who use them. Paradoxically, local market prices for species used in religious ceremonies, such as orchids, bromeliads and cycads, are insignificant, while on the international floral market these products are in great demand and their prices can be quite high. Festivities in which these species are used include Christmas, Carnival, the Candelaria festival, Holy Week, and the feast of the Holy Cross, among others.

Bromeliads

Beutelspacher (1989)⁴ documents the use of up to 3,000 bromeliad flowers of four species during the *Niño Florero* festivities in Chiapa de Corzo. In the municipality of San Juan Chamula, some 380 *cuc nichim* (people who have ritual responsibilities as flower gatherers) each one of them harvests 400 plants every year. This results in an estimated annual use of up to 136,000 plants being used in offerings made to the saints and other activities associated with the ritual calendar.⁵ Rabasa and Domínguez (1999)⁶ estimate that 1,150 live bromeliad cuttings are used to decorate the church of San Juan Chamula each year. All of these species are found in moist pine-oak forests in municipalities of the Chiapas Highlands.

Although there are no records of established trade in Mexico the similarity of conditions with Guatemala suggest that data maybe partially extrapolated. Rauh (1992)⁷ estimates that 75% of Guatemala's *Tillandsia* plants come from natural forests, and that close to 14 million plants are exported each year without regulation. The price of one of these plants can reach US\$19 on the European market. This project will not seek to create a market for these species in particular, although it is important to point out that in the future, very low-income communities involved in the management and conservation of these biological resources could obtain significant economic benefits from trade in bromeliads, thereby reducing their vulnerability and poverty.

Palms

The case of palms is significantly different. Wild populations are being extracted from the Biosphere Reserves of El Triunfo, Montes Azules and La Sepultura, among other locations.

Palm extraction in Chiapas began in the 1950's and grew during the '70's and '80's. The development of the flower industry has had considerable impact on wild populations. Communities supplement their income by collecting and marketing *Chamaedorea* palms, obtaining between US\$4 and \$5 per day. An analysis conducted in Veracruz indicates that one hectare of camedor palm can yield US\$2,000 in annual income. In Chiapas, it is estimated that profits can reach US\$900 per hectare. This income surpasses the income obtained from cultivating maize or coffee. Diversified coffee plantations can produce palm in the understory, thus providing a more balanced economy. Approximately 50% of the palms harvested fail to meet market standards (quality or others, such as leaf size) and therefore are wasted. Prices vary significantly depending on the quality of delivery. The price paid by intermediaries for a packet of palms containing 30 rolls may vary from US\$7 in one community to \$11 in the next. Hence, most of the economic benefits go to the intermediaries, who classify and select the palms according to quality.

Palms are collected by local intermediaries who organize the transportation and delivery to one or two major wholesalers. The fronds are gathered from natural forest areas and, increasingly, from cultivated areas under forest cover. Continental Floral Greens, one of the largest international suppliers of "Latin Greens", has production areas and processing plants in both Mexico and Guatemala; 95% of this enterprise's trade involves wild populations.

The individuals and organized groups who gather the fronds and sell them to middlemen hired by the importers. These middlemen generally develop long-term relations with the import companies and often receive advances to cover emergencies and other expenses. Once collected, the palm fronds are

⁴ Beutelspacher, C.R. 1989: "Bromeliaceas asociadas a la fiesta del 'Niño Florero' en Chiapa de Corzo, Chiapas". *Cact. Suc. Mex.* XXXIV, 2: 44-47.

⁵ Pale, R and Hernández, M., pers. comm. 2006.

⁶ Rabasa, T. and Domínguez, B.R. 1999. "Bromelias: Las flores de los dioses" in Chiapas: Hogar de espíritus detrás de la niebla. Pronatura. *La Conservación de la Naturaleza en México*. No. 5.

⁷ W. Rauh, Are *Tillandsia* endangered plants? Selbyna, 1992. 13:138-139.

transported to centralized collection points and then to processing plants, where they are prepared for shipment by truck or plane to the United States and other destinations.⁸

The United States is one of the main importers of camedor palms, with an estimated volume of 300 to 350 million palms annually. In 2004, the U.S. imported 11,053,095 *manojos*⁹, 88% of which came from Mexico. Pickles (2004)¹⁰ reports that 25% of the *xate* sold in European markets comes from Guatemala, with the rest originating in Mexico. There is high seasonal demand (some 37% of total demand) for *xate* leaves during Holy Week.

A market study by Current (pers. comm., 2004) describes the potential for palm consumption by Christian congregations in the US, in particular with a premium for fair trade and environmental certification. A survey of Christian congregations resulted in an estimated consumption/demand of 27'135,138 palms during Holy Week, with a market value of over US\$27 million dollars. Congregations purchase some 3'780,000 additional palms during the year; in addition to those purchased directly by churches, *Chamaedorea* also are used in floral displays, for weddings and funerals.

The study shows that churches ignore the circumstances under which these plants are produced in rural and indigenous communities in Mexico and Guatemala. Some 80% of the congregation that was interviewed stated that they would be willing to pay a higher price for “fair-trade, sustainable” palms.

Two situations have placed wild palm populations at risk: lack of proper management and lack of growth in the market. Over the past 15 years, Chiapas dropped from being the second largest producer of camedor palm in Mexico to the fifth; intermediaries have reduced their annual orders in recent years, in one community from 2000 to 200 packets.

The project offers an opportunity to turn this situation around, both in terms of the degradation of wild populations and the need to generate additional income for rural populations through improvements in management, palm leaf classification and direct commercial contracts with the churches.

Orchids

Laelia superbiens orchids are very delicate; their subsistence depends on mature oaks and very specific wind conditions. Wild flowers are collected from various locations near Comitán de Domínguez for Christmas and Candelaria (February 2nd) celebrations. Similarly, *Oncidium leucochylum* orchids are collected by Tzeltal people from oak and mixed forests in the municipalities of Amatenango del Valle and Aguacatenango for use in their Holy Week celebrations. Both species are endemic to the oak forests of Chiapas, Guatemala and Honduras, but this habitat is rapidly disappearing as a result of firewood and timber extraction as well as forest fires. *Laelia superbiens* flowers could be also be sold as ornamental flowers for other interests. Preserving the forest and managing the populations of these orchids could suffice to maintain the supply for traditional uses while including targeted high-value markets.

Cycads

⁸ Current D. and D. Wilsey, 2001. The Market for the *Chamaedorea* Palms in North America and Europe: Opportunities for sustainable management and green marketing of the resource with improved benefits for local communities. CCA.

⁹ A *manejo* (handful or bunch) contains 20–25 leaves.

¹⁰ Pickles, (2004). Eco-labeling *xaté*: The potential of certification to aid the development of a sustainable Belizean Palm Industry.

The fourth group includes *cycads* or *espadañas*. Their leaves are used during the festivities of the Holy Cross in the municipality of Suchiapa. Díaz (1989)¹¹ reported that some 60 men from Terán and 50 from Suchiapa collect *espadaña* leaves, each one cutting from 100 to 350 leaves. *Cycads* reach their reproductive age after four to six years. Palacios (1989)¹² estimates that adult *espadaña* plants bear an average of approximately 40 leaves. Conservatively calculating that some 200 leaves are cut by each of the above 105 gatherers, close to 525 *D. merolae* plants are impacted by this tradition annually. The case of these *cycads* is also illustrative, in that the price of these cultivated plants, which are also used for ornamental purposes, can be as high as US\$100 each in Mexico. Plants are also extracted from the wild as seedlings or seeds for cultivation.

The above examples illustrate the significant volumes of a variety of plants that are used in ceremonies in Chiapas. These plants are collected from fragile forests that are under great transformation pressure. In these cases, the loss of biodiversity also implies a loss of cultural practices and identity.

b. Threats and Root Causes of Biodiversity Loss

Chiapas has the second richest biodiversity of any state in Mexico; and although more than 70% of its territory has potential for sustainable forestry, it has the highest rate of deforestation in the country, with some 50,000 to 70,000 hectares of forest being lost every year.

A high proportion of this loss is the result of the following:

- Alteration of habitat, mainly for agriculture and livestock rearing, and agrochemical pollution
- Population growth and expansion of urban frontiers toward forested areas
- Exploitation of wild species well over their natural carrying capacity
- Introduction of exotic species
- Illegal logging, disease and forest fires
- Floods, droughts and hurricanes

Biodiversity is concentrated in areas of high marginalization and poverty where survival options are limited, inducing people to resort to slash-and-burn agriculture and over-exploitation of natural resources. Forest fires, demographic pressure, and the low value attributed to the use of biodiversity lead, in turn, to increasing environmental and social degradation. The same forces that generate poverty also deplete natural resources and biodiversity.

Each case addressed by the project, nonetheless, presents a specific set of circumstances that affect wild populations. The transformation and loss of habitats over the past 10 years is evidenced by the fact that the traditional harvesting of bromeliads by the indigenous people of San Juan Chamula has been displaced to an area more than 100-200 kilometers from the center of town. In the past, this plant collecting took place in the forests of the neighboring municipality of San Cristóbal de Las Casas, barely 20 km away. Today, because of habitat destruction, people must travel to the municipalities of Huixtan and Pueblo Nuevo (see map of bromeliad collection routes, Annex 3, Map 3). In the case of the cycad species used in the May 3 festivities in Suchiapa, the community used to make their pilgrimage to an area in Cerro Nambiyugua, in the municipality of Villaflores, where there were extensive cycad populations. Today, the collection sites have shifted toward the La Sepultura Biosphere Reserve, at a distance of more than 50 km.

These processes are related to the following:

- Peasant collectors and traditional indigenous religious groups are unaware of the current magnitude of the degradation process for the habitats and populations of non-timber species used for religious and cultural practices, despite the fact that collectors have to walk longer distances every year.

¹¹ Díaz, G.D. 1989. "La espadaña milenaria, planta de la Santa Cruz en Chiapas". *México Desconocido*. No. 153: 58-62.

¹² Palacios, E.E. 1989. "La espadaña". *Yashte*. No. 4, 1-4. Tuxtla Gutiérrez.

- There are deficiencies in the scientific information available on the biology and ecology of these species, their current status and resilience.
- There is also limited understanding of cultural practices and ritual uses of NTFP.
- The lack of adequate regulation, partly resulting from lack of knowledge regarding biological/cultural dynamics, is compounded by a lack of institutional coordination among government and sector agencies.
- The deterioration of living conditions and the subsequent reduction of social capital reduces the capacity of communities to effectively organize the rational use/commercialization of their natural resources or regulate access to them.
- In cases where communities have access to markets through intermediaries, the lack of appropriate harvesting and handling techniques reduces the value of the collected plants, as well as the capacity to deliver the quantity and quality required in a timely fashion.
- People of faith who use non-timber species in their religious and cultural practices are unaware of the magnitude of the degradation processes. Consumers frequently ignore where the plants come from or the social and ecological impact of trade in plants.
- Deficient information on markets results in a lack of involvement of religious communities, leading in turn to deficient market opportunities and a low demand for biodiversity-friendly and fair-trade certified products.
- Because of lack of incentives, owners of pristine forest land where ceremonial species are found frequently resort to land-use change, seeking higher-cost opportunities and products, such as agriculture, and charcoal and firewood production.

One of the weakest points in this respect is the deficient legal framework for the management of non-timber species. For example, the regulations governing the harvesting of epiphytes are insufficient. Wolf (2005) points out that the official Mexican Standard (NOM-005-RECNAT-1997) for the extraction of bromeliads allows harvesting of 50% of the individuals in a colony or group of bromeliads. He argues that this standard clearly does not protect bromeliads from depletion. This same standard is applied to orchids and ferns, regardless of species or type of habitat. While species that are protected by some sort of conservation status must be managed within the terms of the Wildlife Law and a Wildlife Management Unit (UMA) must be promoted. Currently, however, the social groups that carry out these collecting practices are unaware of the existing legal framework, and therefore plant gathering continues to take place under a principle of free access.

On the other hand, the latest indigenous rights reform (Official Daily Gazette, 14 August 2001) indicates (Article 2, Section A, Sub-section VI of the Constitution) that indigenous peoples and their communities have the right to autonomy in the preferential use and exploitation of the natural resources found in the areas where they live and occupy land, with the exception of strategic areas. The General Law for Sustainable Forestry Development (Articles 147 and 105) refers to the cultural use of forest resources, mentioning species with medicinal and nutritional uses; it also provides for intellectual property rights, but there are no references to the ceremonial or religious use of plants.

Another problematic issue is the limited coordination between the federal and state governments. The National Forest Commission, which is responsible for implementing forest policy in the country, lacks the resources needed to support the effective development of strategies for managing non-timber species. Furthermore, there is no working relationship between this agency and the institutions responsible for the development of indigenous peoples. Finally, environmental-sector institutions have no collaborative links with the churches.

The commercial potential of the *xate* palm is unique, in that there is already international demand for this product and marketing chains and routes are well identified. However, non-regulated access to the forest, lack of planning and organization for sustainable harvesting, and lack of specific norms and standards for each species have resulted in over-exploitation, particularly of *Chamaedorea ernesti-agustii*, whose population has greatly diminished. Because these palms can only be grown under ecological conditions of shade and humidity, the existence of an established market could generate incentives to conserve the fragile forests where they thrive.

In the case of bromeliads, either the entire plant is collected and used, or the flowers are collected before they produce seeds. Because of these practices, the wild plant populations used for ritual purposes are threatened by harvest and over-exploitation prior to flowering and seed dispersal, thus precluding the completion of the plants' life-cycle and affecting the size of their populations.

In the case of cycads and palms, only the leaves are used. Nevertheless, lack of understanding of the plants' life cycles and best-harvest methods affect their populations, with over-exploitation inhibiting the natural regeneration of the plants. According to Pérez-Farrera and Vovides (2002)¹³, forest fires are also a major threat to cycads.

In the case of orchids, in which only the flowers are used, excessive logging for firewood and charcoal in the oak forests where they grow is reducing the habitat of these species. These forests are host to a unique set of plants and animals endemic to the Central American Temperate Forest Ecoregion.

The owners of the forests where this biological diversity is found have land-use options that are economically more profitable than conservation. In recent years, however, the payments made by collectors to landowners have increased, indicating that landowners could opt to conserve their property if it were possible to create a viable economic option based on these plants.

c. Baseline Activities

The current project involves diverse initiatives. Each selected species presents its own set of circumstances, requiring specific management approaches and social organization. There is a marked difference between the species that currently have no economic value for the local population (such as orchids and bromeliads) and the *xate* or camedor palm, whose economic importance among the rural families in Chiapas is considerable. For a description of the current situation of each group of selected species please refer to Ecological Significance in Annex 6, Environmental Assessment.

The participation of religious congregations in conservation

Sacred woods, forests and trees are recognized by all of the major religious cultures of the world. Trees constitute a fundamental element of the mythology of many faiths, from the Tree of Knowledge in Judaism, to Christianity's Tree of the Cross, to the sacred trees of Hinduism. The fact that trees are sacred within the great faiths is a reflection of the fact that forest products are crucial to a healthy natural environment. ARC has promoted projects in diverse parts of the world under its Sacred Land Program, including a project with Shinto leaders to preserve their sacred groves and shift to Forest Stewardship Council (FSC) certified or equivalent timber for their temples, thereby complying with sustainable forestry standards. In 2000 in an unprecedented move, the Church of Sweden agreed to move toward certifying 15% of its forests—more than 100,000 hectares—as sustainably managed under FSC guidelines. Hindu groups and the Orissa government have agreed, under the Sacred Gifts Program, to re-establish the state's sacred forests, providing sustainably-managed wood for the annual festival of Lord Jagannath.

ARC efforts worldwide are very valuable. In the case of Mexico and Chiapas, however, although the importance of participation of religions in conservation has been expressed through solid commitments at the upper hierarchical levels, it has not yet had an impact in the field. This project will provide a means of putting the agreed-upon principles into operation. The local churches—whether Christian, Catholic, or traditional indigenous religions (Mayan, Tzotzil and Tzeltal)—are uninformed about the impact that some religious practices have on the environment; at the same time, they lack the knowledge necessary to be able to incorporate sustainable management of natural resources within their poverty alleviation, equity or human rights strategies.

The presence of churches in communities and the social development programs they carry out there have made it possible for people in marginalized areas to organize themselves to generate certain

¹³ Pérez-Farrera and Vovides, 2002. The ceremonial use of the threatened “espadaña” cycad (*Dioon merolae*, *Zamiaceae*) by a community of the central depression of Chiapas, Mexico.

benefits. Churches have participated in promoting organic coffee, for instance, and several organizations, such as Lutheran World Relief and Catholic Relief Services, promote fair trade and poverty alleviation. Yet only now are these groups considering undertaking projects in Chiapas, thanks to this partnership initiative. They are willing, for instance, to buy sustainably harvested palms and to promote responsible, environmentally friendly trade among their congregations. They have expressed this interest to Continental Floral Greens, who has agreed to support local consumers and producers by participating in and promoting a special green trade program.

The Latin American Council of Churches is participating in the United Nations Environment Program's project entitled Global Environmental Citizenship; this project includes training activities on global environmental problems, directed specifically to evangelical churches. The Inter-Religious Council of Mexico has also expressed interest in promoting forest conservation and restoration among the local people. All of this groundwork will serve as an important point of departure for raising awareness among churches.

The hierarchies of the "traditionalist catholic" faiths, as they are known locally—products of the syncretism that occurred between Mayan cultural practices and the Catholic Church as a result of its penetration during the conquest—are uninformed with regard to the pressures that ceremonial use of plants exercises on natural resources and biodiversity, which is not addressed in public policy on indigenous cultures and their development.

d. GEF Alternative and Incremental Cost

The initiatives described above have generated important information and experience; they have also made it possible to create interest among the main stakeholders and establish linkages among organizations. Nevertheless, the main causes behind the destruction of these species' habitat have not been resolved, and sufficient incentives have not been created.

GEF funding will promote the development of strategies and incentives for conserving globally significant biodiversity, while demonstrating the benefits of sector partnerships among religions of various faiths, designed to overcome obstacles and address the root causes behind the destruction of forests and the persistence of poverty.

1. The oak and mixed forests of the Central American Pine-Oak Forest Ecoregion (bromeliads and orchids) are home to large quantities of species that are endemic to the region; these forests still serve as a functional biological corridor and a corridor for migratory species. Despite the value of their biodiversity, however, these are not federal or state protected areas. Pronatura has two natural reserves that barely cover 300 hectares. GEF funding will make it possible to put in place strategies that will foster participation among indigenous communities, based on traditional practices; this will be geared to the establishment of local conservation mechanisms, whether in communal reserves, UMAs or land easements (Sacred Forests). Incentives for landowners will be identified in coordination with the communities. The project will promote the participation of other organizations in conserving mature oak and pine-oak forests in the region. These activities will aim to reduce pressures to convert land-use to firewood and charcoal production, which are the main causes of forest deterioration. Fostering the conservation of bromeliads and orchids endemic to the region will also contribute to conserving biodiversity.
2. In the Biosphere Reserves of El Triunfo and La Sepultura, the project will contribute to generating additional income and building capacities among community members in sustainable harvesting; in-situ propagation to enrich population size and density within the forest; and marketing practices for palms and cycads. The project will aim to reduce the expansion of the agricultural frontier; this is one of the main causes of deforestation in the region, particularly in communities near the core areas of the Reserves.
3. Agreements with Christian church congregations in Mexico and the United States will help to raise interest in biodiversity conservation among people of faith, thereby increasing the

benefits from and strengthening the market for palm and other products. Emphasis will be placed on benefits to fellow beings (fair trade) and stewardship of creation (biodiversity).

4. GEF funding will be targeted at building local capacity and creating synergies among communities, institutions, buyers/sellers, and consumers, with the final aim of improving sustainability.
5. GEF funding will also enable work on strategic actions to reduce threats and eliminate barriers, specifically: creation and establishment of conservation mechanisms and incentives; improvement of the regulatory framework; and development of good practices for managing these species and their habitats.

No other initiatives currently address the needs identified by this GEF funding alternative. Although some important efforts are underway (with palms, for example), these are isolated. GEF funding is critical to mobilizing and catalyzing institutional resources as well as the interest of communities and churches. Without the GEF investment, the tendency to reduce species' wild populations and their habitats will continue.

Table 2. Summary of the GEF Alternative for each group of species

<u>Current Situation</u>	<u>GEF Alternative</u>
<u>Non-timber forest products</u> <ul style="list-style-type: none"> - Inadequate regulation - Lack of institutional coordination 	<ul style="list-style-type: none"> - Robust proposals for adequate regulation - Improved institutional coordination
<u>Bromeliads</u> <ul style="list-style-type: none"> - Massive collection of bromeliads in old oak forests of the Chiapas Highlands for various festivities - Plants cut before seeds disperse - Landowners don't establish cutting quotas - Forests are transformed for agriculture and firewood 	<ul style="list-style-type: none"> - Management of the population of bromeliad species, including enrichment of forest areas in the region - Harvesting quotas and compensation agreements established with landowners - Extractive reserve established on the Tzontehuitz volcano - Municipal nursery for tree reforestation to improve the habitat with native oak species - Community botanical garden adding value (tourism)
<u>Chamaedorea palm</u> <ul style="list-style-type: none"> - Foliage wasted because of incorrect practices - Permits previously granted to communities cancelled because of irregularities - Lack of social organization - Unexplored market potential with churches - Diminished wild populations - Unplanned plant collection 	<ul style="list-style-type: none"> - Reduced waste - Quality control carried out by communities - Regional organization - Marketing agreements established with churches - Recovery of wild populations
<u>Orchids</u> <ul style="list-style-type: none"> - Low valorization of the species, other than the flower - Plant waste resulting from tree-cutting for firewood - Good propagation potential - Unprotected habitat 	<ul style="list-style-type: none"> - Management of wild populations - Establishment of extractive reserves - Community botanical garden to add value (tourism) - Reforestation and firewood management - Potential flower trade
<u>Cycads</u> <ul style="list-style-type: none"> - Affected populations in Cerro Nambiyugua - Pressure from pilgrimages on natural populations in Biosphere Reserves - Fires damage habitat - Poor harvesting practices affect plants 	<ul style="list-style-type: none"> - Establishment of conservation area and extractive reserve in Cerro Nambiyugua, with municipal support - Traditional collectors practice new harvesting practices that don't damage the plants

<ul style="list-style-type: none"> - Market for high-valued species not developed by communities 	<ul style="list-style-type: none"> - Extracting zones defined within the forest and protected areas - Propagation trials with cycads in dry forest increase production/leaves
---	---

Locations selected for the project:

The project will work in several locations in the Chiapas Highlands (San Juan Chamula—bromeliads; Aguacatenango and Amatenango—orchids), the Chiapas Sierra Madre (palm-harvesting communities in the Triunfo and Sepultura Biosphere Reserves), and the Municipalities of the Central Plateau (Suchiapa and Villaflores—cycads).

With regard to bromeliads, the project will place special emphasis on working with the San Juan Chamula *cuc nichim*, religious authorities and municipal authorities. Enrichment areas within the forest and reforestation areas will be defined through joint work sessions, as will mechanisms for entering into agreements with forest landowners.

The project will work with the following palm collecting communities in the Sierra Madre de Chiapas during the first year: Sierra Morena, Tierra y Libertad, Capitan Luis A. Vidal, and Laguna del Cofre; another four communities will be incorporated during the second year (see Annex 9, Social Assessment). These marginalized communities are located within significant Biosphere Reserves where palms represent an important income generating alternative, allowing the project to address the root causes of biodiversity loss, including agricultural expansion.

Through the participation of stakeholders and local institutions, GEF funding will enable the establishment of a work program, including actions to strengthen organizations, manage wild populations, certify good practice, build markets, and establish trade agreements.

The project will enable the Orchid Garden to establish a network of *in situ* nurseries or botanical gardens to disseminate good management practices in the villages of the Amatenango, Aguacatenango and Comitán municipalities. The Orchid Garden will promote the conservation of forests, as these are the areas where mother plants are produced. Flower nurseries will be used to provide supplies for traditional ceremonies, and will also help to promote marketing of the flowers (not the plants) as an income-generating option for the villages. In the municipalities of Suchiapa and Villaflores, the project will support municipal initiatives to establish a reserve. It will also work with collectors, the church, and May 3 celebration committees to reduce the negative impact of collecting. In communities where cycad leaves are extracted, nurseries will be established for reproduction and restoration.

The GEF alternative contains four components:

Component 1. Knowledge Management for the Conservation of species used in ceremonies

Although research on the species in question has been carried out, there are no current studies on the distribution and status of their populations. Furthermore, the information available has not been used to create management alternatives within the communities. The regulatory framework is deficient, particularly the Official Standards for species management, and there are gaps with respect to species used for traditional or cultural purposes. Although these species are included within the protected categories, in practice extraction is not regulated.

Component 1 seeks to use the existing information to develop management practices, as well as to close information gaps that limit the possibility of developing effective conservation strategies; this includes improving the availability of information on habitat distribution and status, as well as on areas that could stand to benefit from alternative management and conservation mechanisms (wildlife management units, land easements, etc.) Work will also be carried out to develop good-practice criteria for the management and propagation of these species. This information will make it possible to propose regulatory measures that will improve the Official Standards for the management of these species in Mexico. The GEF alternative will enable:

- The generation of databases and reports on the distribution, impact of utilization, traditional uses, and conservation status of wild populations of the selected species of bromeliads, cycads, palms, and orchids
- Increased availability of knowledge (produced in collaboration and shared with the communities) on the propagation of orchids, bromeliads, and cycads for traditional and commercial use
- Compilation of the existing documentation on propagation assays for orchids, cycads and bromeliads
- Development of indicators for sustainable harvesting and standards application
- Production of a feasibility study on Extractive Reserves in selected sites, including indicators for the definition of harvesting methods
- Presentation to authorities of a proposal, produced with the support of stakeholders, for improving regulations governing non-timber products

The GEF alternative amounts to US\$280,289, including a baseline cost of US\$55,769. This amount does not include the cost of studies that were previously produced. The incremental cost is US\$224,520 (GEF contribution—US\$126,443; co-funding—US\$98,077).

Component 2. NTFP Cultural Participatory Management Plans

One of the weaknesses the baseline data has allowed us to identify is the lack of informed participation by, capacity building among and benefits for the communities—benefits in the form of concrete incentives to improve practices. The interest shown in commercial use species has been demonstrated mainly by scientists (cycads, orchids and bromeliads) and the need for conservation strategies has been pointed out by the National Commission of Protected Natural Areas (CONANP). Yet these groups or institutions have no responsibility for carrying out social development actions, and they cannot allocate human resources to providing technical assistance and training for communities. At the same time, consolidation of processes of development and capacity building in community organizations requires several years, which generally implies high costs.

Component 2, therefore, consists in activities aimed at capacity building within local communities, including: organization; developing education and communication strategies to raise awareness of the problems surrounding ceremonial-use species and their habitats; facilitating agreements on access to harvesting and the distribution of benefits, and fostering related planning processes, within and among communities; developing incentives for the establishment of management areas; and developing marketing opportunities for the species contemplated in this proposal. A significant part of the GEF funding will be designated to this component.

Work will be undertaken with CONANP and the National Forestry Commission (CONAFOR) to establish a strategy for strengthening *xate* palm management in Protected Natural Areas. CONANP has agreed to provide resources to support a joint, shared strategy in the communities covered by the project; these resources could include paying community promoters to join the project team. Pronatura will cooperate with the project by making available the Moxviquil Training Center for Sustainability, which has experience in designing training for rural and indigenous communities, as well as the Environmental Communication Center. GEF's contribution will enable these Pronatura units to provide consultants and materials needed to provide training and to develop communication strategies.

With regard to indigenous communities in the Chiapas Highlands, the state government's Ministry for Indigenous Peoples (SEPI) will support the establishment of botanical gardens and bromeliad and orchid propagation areas within the forest understory. The municipalities of San Juan Chamula and Villaflores have expressed their interest in supporting the project with complementary, in-kind resources; they will also negotiate the local population's participation and establish forest conservation areas for ceremonial plants within their municipalities. The GEF alternative will facilitate:

- Producing participatory plans and community agreements for managing and harvesting selected species at the sites

- Developing social structures in the communities, including a clear definition of roles and benefits
- Generating greater awareness of species conservation among indigenous and peasant community authorities, families, and collectors in Chiapas through an environmental and social communication strategy
- Training members of the communities in sustainable harvesting and *in situ* propagation of non-timber products
- Establishing collaborative agreements for forest management and protection between forest owners and traditional users of cycads, bromeliads, and orchids
- Creating a formula of incentives or compensation for owners in the identified and tested extractive forests, including conservation easements and environmental services schemes
- Empowering indigenous communities through greater involvement in the market chain, especially for palm species
- Establishing a regional organization of palm producers in Chiapas

This component includes support for community initiatives through sub-projects that will be prepared and presented by the respective communities. These sub-projects may include: establishing nurseries, equipping gathering/storage centers, establishing botanical gardens and paths, additional training activities, or starting up a second tier *xate* palm organization, among others. Individual non-refundable grants for these projects will not exceed US\$20,000.

Pronatura will provide optional support to the sub-projects with complementary funding from its Environmental Enterprises Assistance Fund. The fund has US\$500,000 available for working capital or investment loans, the latter for infrastructure.

The GEF alternative for Component 2 is amounts to US\$1,489,419. The baseline amount is US\$212,577 and the incremental cost is US\$1,276,842 (GEF contribution US\$546,111; co-funding—US\$730,731).

Component 3. Partnership Building with Religious Groups for Conservation and the Promotion of Fair Markets

Various religious groups, whether Christian or the result of the syncretism of indigenous and Catholic practices, are the target market for these products.

Conservation organizations are more involved in the specific case of palms; weaknesses have been observed, nonetheless, in the ability to catalyze experiences, community participation, and relations with religious organizations. The University of Minnesota has made efforts in this sense, but it does not have adequate funding to build the market and facilitate synergies with the churches. While ARC could broaden Christian church participation, it also lacks the funding to do so.

Indigenous communities in the Chiapas highlands represent the stronghold of Mayan culture in this region. Local community cohesion and the conservation of traditional community structures have protected their identity from Western culture, to such a degree that few outside organizations have achieved effective collaborative relations with the communities. Environmental conservation in these areas can only be achieved by developing horizontal relations based on respect for the local culture. The project proposes to carry out activities with the full participation of traditional community authorities. In this regard, the authorities of the municipality of San Juan Chamula participated in drafting the current project and have expressed interest in facilitating communication with and participation of traditional community groups.

Component 3 includes activities aimed at enhancing the participation and involvement of the species' users: Christian religious congregations in Mexico and the United States (palms), the Catholic Church (cycads and orchids), and traditional indigenous groups (bromeliads and orchids) in the Chiapas Highlands. Furthermore, these activities involve the participation of local government stakeholders, such as the municipalities of Villaflores, Suchiapa, and San Juan Chamula.

Incremental resources will facilitate holding meetings and workshops, as well as promoting the use of sustainably harvested palms and other species for religious events as well as festivities among religious congregations. Some of the expected results are:

- Partnerships and alliances established with Christian groups as consumers of non-timber products
- Trade agreements formalized with communities and religious organizations to improve market sustainability
- Environmental communication strategy developed for Catholic and Christian churches, with the support of ARC and the University of Minnesota
- Partnerships and commercial agreements established between communities and religious groups through exchanges and visits.
- Greater conservation awareness promoted among consumers and regulatory authorities for non-timber species and products

The GEF alternative for this component is US\$309,312 and the baseline is US\$16,346. The incremental cost is US\$292,966 (GEF contribution—US\$96,682; co-funding—US\$196,284).

Component 4. Project Management, Monitoring and Evaluation

This component includes the cost of managing the project and the increment needed for Pronatura Chiapas to be able to coordinate and manage activities; this includes purchasing a vehicle—which will be used principally for field activities, computer equipment and furniture, as well as costs related to the monitoring, evaluation and systematization of the project. The organization has a multidisciplinary team that will collaborate on project implementation as part of the institution's contribution to the project. It also has a collection of geographic information on the project regions, as well as infrastructure such as vehicles and field equipment. Annex 5 describes Pronatura Chiapas. Administration costs are calculated at 11.9% of the total budget.

The GEF alternative for Component 4 is US\$274,014, the baseline amount is US\$15,000 and the incremental cost is US\$259,014 (GEF contribution—US\$180,745; Pronatura's contribution—US\$78,269).

A table summarizing the analysis of incremental costs is found in Annex 1.

Project Activities and Outcomes

Strategic Objective

To increase conservation measures in Chiapas, in areas of high biodiversity, by establishing a collaborative framework among religious entities, traditional indigenous groups, forest owners, and the government for the sustainable use of NTFP with ritual and ceremonial value.

Activities and output/outcomes by component.

Component 1. Knowledge management for the conservation of species used in ceremonies

Activities in this component will contribute to overcoming three of the currently identified obstacles: 1) insufficient information on the status of populations and distribution of species, as well as on the impact of extraction for traditional and religious uses; 2) limited systematization and sharing of knowledge on propagation and sustainable extraction techniques for the species; and 3) deficiencies in the legal framework for regulating use, as well as deficiencies in extraction quota criteria.

Sub-component 1.1. Information and technical development for the sustainable use of species, conservation of habitats and elaboration of technical norms

In this sub-component, the currently scattered information will be collected and made available to communities and decision makers. The project will conduct complementary studies to improve current understanding and generate practical management results based on sound knowledge. The results

obtained through this sub-component will make it possible to communicate the biological importance of these regions to other audiences and stakeholders, as well as to consolidate the technical foundations for the development of management guidelines and the definition of harvesting rates.

Activity 1.1.1. *Promoting participatory research and knowledge sharing.* Information sharing and participatory knowledge development will be fostered through the integration of community and technical teams. Field visits, informal meetings and community workshops will be conducted in order to generate and share information about the historic and current use of ceremonial plants; data about the volume of bromeliad, cycad and orchid species will also be systematized. During this activity, visits will be made to sites where the species were previously collected in order to discuss conservation, cultural and social issues, as well as the economical and environmental impact of the degradation of natural resources, with the community members.

Activity 1.1.2. *Building knowledge on current species distribution and the status of their habitats.* This activity includes compiling and systematizing existing information, conducting field trips to assess populations, and mapping potential conservation sites on a GIS. This activity will build on existing information from the process of ecoregional planning of pine-oak forests in Central America, and will contribute to better understanding of the ecology of the species and their habitats.

Activity 1.1.3. *Determining the feasibility of the sustainable harvesting of species so as to define UMA (extractive reserves).* Based on studies on cycads by Farrera, on bromeliads by Wolf, and on the existing knowledge regarding management of *xate* palm and orchids, specific management studies will be conducted; these will explore population dynamics in areas within the Huitepec Reserve, the forests of Aguacatenango, and the La Sepultura Reserve. The studies will be selected through a call for proposals. These sub-projects will be targeted at research groups and post-graduate students capable of generating practical and high-quality information about harvest quota rates for species groups in prototypical forests. Financial support will be granted through letters of agreement.

Activity 1.1.4. *Seminar on religion and biodiversity in Mexico.* The project will contribute resources for the creation of a database compiling knowledge about the linkages between religion and biodiversity. Information and experiences will be discussed and analyzed through quarterly seminars and two international events. Knowledge concerning the interaction between religion and biodiversity will be systematized and disseminated to permit strategy identification and policy design for future strategic intervention areas, when the project outcomes are scaled up.

Activity 1.1.5. *Studies on the cultural use of species for symbolic and ceremonial purposes, as well as social organization related to the collection of these species.* Each of the rituals and cultural events related to the NTFP covered by the project bring into play different social organization, cultural significance and land tenure issues. A consultancy will be contracted to conduct a survey of the social perceptions, organizations, community involvement and cultural values associated with the use of these plants. This information will be used to help in defining the specific strategy for the involvement of each of the local religious and traditional groups participating in the project cases.

Activity 1.1.6. *Studies to prepare incorporation of new areas and communities.* During project preparation, assessments were conducted for three pilot communities in El Triunfo and la Sepultura, as well as in the municipality of San Juan Chamula. The assessments for the new areas and communities that will be participating in the second year will be conducted during the first semester of project implementation.

Output/Outcome 1.1 Indicators and criteria established for the sustainable harvest of selected species and the sustainable management of their habitats. / Technical knowledge improved for the management of NTFP of ritual use.

Sub-component 1.2. Strengthening of the regulatory framework for management and the guidelines for certification and sustainable management

This sub-component focuses on developing a strategy for the participatory design of regulatory proposals, based on the information obtained and the experiences of other organizations. These activities will strengthen other national initiatives currently being implemented, such as the

Mesoamerican Biological Corridor; the Project for Biodiversity Conservation by Indigenous Communities in the States of Oaxaca, Michoacan and Guerrero, Mexico (COINBIO); and the Project for the Conservation and Sustainable Management of Forest Resources in Mexico (PROCyMAF).

Activity 1.2.1. *Establishing criteria for the sustainable management of each group of species.* Based on the information resulting from the activities conducted under Sub-component 1.1, as well as a review of literature and experiences in other parts of the country and the world, the project team will develop a first draft of criteria for the sustainable management of the species. Work sessions will be organized to discuss and analyze the proposed drafts. Representatives from the academic sector, civil organizations working in non-timber species management, and government agencies (CONAFOR, the Wildlife Directorate of the Ministry of Environment and Natural Resources, and the National Commission for the Knowledge and use of Biodiversity) will be invited to participate in this activity to permit the establishment of guidelines and criteria for the sustainable management of the species.

Activity 1.2.2. *Integrating technical standards proposals.* This activity comprises drafting standards and regulation proposals for managing non-timber species, based on consultations with interested groups and experts.

Activity 1.2.3. *Presenting proposals for improving Official Mexican Standards.* The proposed standards will be presented to consultative bodies and the offices of standardization and regulation of the Ministry of Environment and Natural Resources (SEMARNAT). For this activity, advice from a legal consultant will be sought.

Output/Outcome 1.2. Strengthened standards framework established for the regulation of non-timber species in Mexico. / Enabling environment created for extractive reserves to permit direct provision and export of NTFP of ritual use.

Component 2. NTFP Cultural Participatory Management Plans

The project approach integrates management of the target species within a comprehensive framework that will connect culture values with conservation measures and socio-economic benefits. The project will produce specific management plans for the species in each community while helping the communities and traditional gatherers to appreciate the environmental dimension of their practices. In this way, the communities involved will be empowered to strength their cultural identity by preserving wild populations and their habitat, thereby maintaining their social cohesion. This component also aims to foster the social organization needed to improve access to NTFP and their benefits and to promote shared responsibility. In the case of palm, it will include work to improve community capacity to establish fair-trade agreements and access b-friendly markets.

Sub-component 2.1 Participatory Planning

Participatory Planning activities (workshops, meetings, interviews, field surveys, etc.) will help to define management, extraction and propagation areas within the *ejidos* (communal land holdings) and communities of the Biosphere Reserves. This will support decision making and internal negotiations regarding equitable access to resources. It will also enable communities to have a clear understanding of the status of their resources as well as the potential for sustainable harvesting and habitat management. This process will result in management plans that will be used by the communities to negotiate legal permits and to establish Wildlife Management Units.

Activity 2.1.1. *Planning workshops, meetings and field trips with social groups and territory owners, aimed at defining management areas.* These activities will be developed with the groups involved in collecting ceremonial plants: the *cuc nichim* in San Juan Chamula and Aguacatenango; the *ejidos* in La Sepultura and El Triunfo Biosphere Reserves as well as in other regions during the second year; the committees that collect *espadaña* cycad leaves in Suchiapa; and CONANP representatives, in the case of Protected Natural Areas. Participatory planning activities will also be designed to evaluate the specific roles of men, women and children in collecting non-timber species. Information will be gathered on local uses and the demand created by religious activities.

Activity 2.1.2. *Community agreements and distribution of benefits.* Activities will be conducted in conjunction with community assemblies and communal, municipal and *ejido* authorities to establish

agreements regarding access to and distribution of benefits from species gathering, and to develop internal standards and rules to reduce the pressure on fragile resources.

Activity 2.1.3. *Integrating community plans for species management.* Site-specific management guidelines will be produced for each community and each species. In addition, this information will be used to produce the documentation needed to obtain extraction permits from the environmental and forestry authorities.

Output/Outcome 2.1. Community management guidelines and management plans in place for access to species. Communities using NTFP in the context of long-term vision and solid agreements.

Sub-component 2.2. Strategies for managing non-timber forest products for ceremonial use

Activity 2.2.1. *Technical assistance for species management.* A technical team will be hired for the project and integrated within the forestry program of Pronatura Chiapas. The team will coordinate with CONANP for activities in the communities located in Biosphere Reserves, and with the local communities, communal assemblies and municipal authorities of San Juan Chamula, Aguacatenango, Suchiapa, and Villaflores to reach shared agreements on the training and technical assistance required. Activities will include work with producers and gatherers to devise improved technical measures for the design, establishment and management of nurseries; population recovery; and the definition of extraction practices and rates. In the case of *xate* palm, the team will also work on improving the leaf selection and commercialization processes, to reduce waste and improve profits. The activities will also include design of communication strategies, such as labeling the palms so that consumers can identify the origin of the product and will, therefore, be willing to pay the premium price for these b-friendly fair-trade products. The technical team will advise the communities on current standards and will help catalyze the local coordination of government programs. These activities will link with the actions considered in Components 1 and 3. Pronatura's Orchid Garden will be adapted to serve as a training facility, providing technical assistance and advice to the communities aimed at helping them to create their own botanical gardens, with well designed and operating visitation paths and propagation areas; training will also focus on the sustainable harvesting of bromeliad and orchid flowers.

Activity 2.2.2. *Training a community-based technical team.* As part of the capacity building strategy, the project will contract community promoters so that during the implementation phase, they can acquire the technical skills and knowledge needed to guide the management of non-timber species. The indigenous promoters in the Chiapas highlands will be native Tzotzil speakers who are knowledgeable with regard to local culture and traditions. This development of local human resources will contribute to sustainability beyond the project funding period.

Output/Outcome 2.2 Communities trained. / Communities empowered and local technical capacity increased.

Sub-component 2.3. Training on local organizational development

Because of the current trends of depletion of wild NTFP populations used for ceremonial and religious purposes, communities need a new approach to the management of these resources. To this end, it is considered fundamental to create new organizations and strengthen existing ones; this will also contribute to the development of social capital in the region. The organizational strengthening strategies employed will focus on recognizing the current structures (traditional responsibilities, *ejido* assemblies), while at the same time promoting agreements within the communities that will enable ceremonial plant users and collectors to receive training and participate in the management of these resources. Especially in the case of the *xate* palm, given its commercial dimensions, several types of social arrangements are required, including both internal organization to define access and benefit sharing, and commercial organization for trade and financial management. These structures could be local (community based) or regional.

Activity 2.3.1. *Working sessions and meetings to support organization processes and to strengthen producers' organizations.* Plant collectors are generally individuals who come together at specific times of the year, according to the ceremony or festivity; sometimes committees are formed or

responsibilities are assigned. In the case of palms, individuals, groups, or community organizations carry out the collection; the organizational level depends on the economic importance that the activity represents for the community and group. In order to integrate environmental criteria within species management, it is necessary to work with the current organizations as well as to facilitate the creation of new social structures.

Activity 2.3.2. Workshops, courses and exchanges to build capacity among the groups involved in improving species management. This training will include propagation and enrichment techniques in wild areas, techniques for cutting leaves and flowers, seed collection techniques by species, and organizational processes within the groups involved in the project. The training will target men and/or women, according to the existing division of labor. Meetings and exchanges will be promoted among the groups; two exchanges will also take place with Guatemala and Veracruz. Two intensive courses on management of NTFP will be conducted; these courses will involve community members and technicians from the governmental agencies.

Activity 2.3.3. Regional fora with traditional Mayan representatives of the ecoregion. Two regional encounters will take place. Guatemalan Mayan groups from the same ecoregion and other groups from other parts of the country will be encouraged to participate in these encounters.

Activity 2.3.4. Regional meetings of xate palm producer communities. The goal of these meetings will be to form a regional organization of producers, aimed at organizing palm supply and standardizing prices and quality, thereby increasing producers' capacity to negotiate with the intermediaries and other market representatives.

Output/Outcome 2.3. Community organizations trained in adequate species management and sustainable harvesting. / Capacity of the communities for sustainable use of NTFP improved.

Sub-component 2.4. Environmental communication and education

The disinformation that prevails among several groups with whom the project will be working has been identified as an obstacle. Diverse technical concepts, language barriers, and cultural differences create communication gaps that preclude the productive exchange of ideas and the generation of greater local support. The exchange of scientific and traditional knowledge will contribute to achieving project goals by enabling long-term ownership of this knowledge. For decades, ceremonial species were collected without problems of scarcity, and their deterioration is barely perceived or understood by those who do not have access to information at the landscape level. Furthermore, there is insufficient knowledge about the life cycles of the species. The project will foster intercultural dialogue aimed at developing viable strategies with indigenous groups and rural communities.

Activity 2.4.1. Designing targeted communication strategies according to species and stakeholders. This activity will involve the analysis of perceptions and beliefs related to species and forests, as well as to threats to habitats in the selected sites; this analysis will be aimed at defining the most appropriate communication messages and media, thus facilitating dialogue.

Activity 2.4.2. Producing materials, conducting environmental communication campaigns and carrying out environmental education. Audiovisual materials will be prepared with the participation of community groups. Activities identified through the strategies will be conducted with the aim of promoting greater awareness of and increasing social commitment to the sustainable management of the target species. These may include activities for children and young people, as well as radio and video productions in indigenous languages.

Output/Outcome 2.4. Increased environmental awareness about the relation between culture and conservation achieved among local users of ceremonial plants. / New practices and standards internalized and adopted by communities according to their values and for their own benefit.

Sub-component 2.5. Incentives and alternative mechanisms for conserving sites and species

As described in other sections of this document, cycad and bromeliad users are not the landowners of the sites where they collect the plants. This results in two types of situation: 1) because collectors are not investing in the property from which they extract plants each year, if forests disappear as a result

of fire or agricultural over-exploitation, the collectors simply migrate to new sites; and 2) landowners receive no benefits from collecting to motivate them to conserve the forests as ceremonial-species harvesting sites. There are various possible solutions to these situations: the people interested in the plants could purchase the land; the owners could sell the plants; or agreements could be reached and incentives created for both parties, who could then negotiate benefits. These benefits could include developing management plans and establishing extractive reserves, so that part of the production could be sold on national or international markets and part of it reserved for ceremonial or traditional use. Another option would be to develop tourism strategies, or environmental services fees for biological diversity. The project will explore these mechanisms, facilitating negotiations between the parties in order to achieve conservation results, both in terms of culture and biodiversity.

Activity 2.5.1. *Identifying incentives for landowners.* Field visits, interviews and meetings will be held with the landowners of the collecting areas for bromeliads and cycads; the project will work with them to identify potential incentives that would induce them to become conservation partners, maintaining and managing their land appropriately and sustaining the wild populations and habitats of ceremonial plants. A review of existing environmental services schemes and other incentives will be conducted.

Activity 2.5.2. *Negotiating conservation strategies with landowners.* Meetings, workshops and exchange visits will be carried out to facilitate negotiation process between landowners and collectors and promote the identification of solutions that respect the interests of the involved parties. These may include payment for environmental services (biodiversity) as well as conservation mechanisms (UMAS or extractive reserves, ecological land easement, community or municipal reserves).

Activity 2.5.3. *Establishing municipal or community conservation areas.* The municipalities of San Juan Chamula and Villaflores have expressed interest in obtaining technical support and advice to develop a process for the legal establishment of conservation areas. The project will produce maps, delimitate the areas and conduct studies to develop the documentation needed for the declaration of the sites. The project will also explore the possibility of including a specific management objective related to religious use as sacred sites.

Output/Outcome 2.5. Incentive model established for landowners in extractive areas and for community or municipal conservation areas. / Areas under good management and conservation of selected species and habitats expanded.

Sub-component 2.6 Sub-projects to develop community experiences in management, propagation production, and marketing of non-timber species

This component focuses on providing financial support for community initiatives that seek to develop production, propagation, and population restoration activities, as well as for acquiring basic equipment for local organizations. GEF resources will be used as seed money, covering the local contribution required by government funding programs. These resources can also be combined with loan projects through Pronatura Chiapas' Environmental Enterprises Assistance Fund to meet additional equipment needs. The type of activities that could be funded through sub-projects include: establishing nurseries; equipping local organizations; providing materials for botanical gardens and natural interpretation trails; producing communications materials; labeling and posting sign on paths; building greenhouses; maintaining bromeliad and orchid propagation areas; building fuel-saving stoves; and conducting reforestation campaigns, among others. Annex 9 presents the approval criteria for sub-projects.

Activity 2.6.1. *Establishing criteria and sending out calls for proposals for sub-project selection.* In coordination with project partners, the criteria for selecting community sub-projects will be established. Proposals will be received from the communities; the selected sub-projects will not exceed US\$20,000.

Activity 2.6.2. *Providing support for and follow-up on community sub-projects.* Once community sub-projects have been approved, Pronatura Chiapas will provide follow-up support and evaluate results through visits to the communities and a specific monitoring system.

Output/Outcome 2.6. Subprojects approved and implemented. / Production of recovering plant populations increased and value added to traditional-use species in various locations in Chiapas.

Component 3. Partnership Building with Religious Groups for Conservation and the Promotion of Fair Markets

This component focuses on working directly with resource users, in particular religious congregations activities will be conducted to increase the involvement of religious congregations in fair-trade and b-friendly schemes for the sale of palms to the US and Europe.

Sub-component 3.1. Partnerships with religious congregations to promote fair trade in the United States and Europe

This subcomponent will focus on working with religious congregations in the US and Canada to increase the demand for fair-trade and b-friendly palm products, especially for Palm Sunday. It will establish close communication and agreements of support and will involve representatives of the congregations in the project process. Activities include producing communication materials, visits, and coordinating events.

Activity 3.1.1. Producing events and materials for promoting church participation in nature conservancy actions. Meetings will be held to provide information and present the project to the various levels of the church hierarchies, with the aim of increasing awareness of the relationship between religious practices and the use of non-timber species; opportunities for implementing conservation and social development strategies will also be presented. Information about the social conditions of the producers as well as the relevance of biodiversity at the project sites will be included in the materials.

Activity 3.1.2. Establishing agreements for fair and sustainable trade with Christian congregations in the U.S. Activities such as meetings, exchange visits and continuing communication among community members, religious congregations, Pronatura Chiapas, commercial stakeholders (Continental Floral Greens) and retailers will be carried out by the project team in order to facilitate negotiations and agreements that will link supply and demand. Religious groups will also visit palm-producing communities in Chiapas to establish cooperation ties.

Output/Outcome 3.1 Management practices, guidelines and agreements established and verified with people of faith who use NTFP. / Fair and sustainable trade of *Chamaedorea* spp. palm established with Christian congregations in the United States.

Sub-component 3.2. Partnerships with religious faiths in Mexico to promote the adequate management of species used in ceremonies

In the case of local Catholic festivities (cycads, orchids and bromeliads), specific activities will be conducted with the hierarchy of the Catholic Church in Chiapas and Mexico City. With the support of ARC, the project will also promote the involvement of the Interfaith Council of Mexico and of networks of Christian organizations, such as the Latin-American Council of Churches. Communication materials, meetings and site visits will help to increase the participation of religious organizations in promoting conservation among its constituencies, and to promote fair trade of palm and other NTFP in Mexico among religious groups and communities. Specific communication campaigns will be developed in agreement with the Catholic Church for the locations in Chiapas (Suchiapa, Chiapa de Corzo and others) where Catholic festivities involve the extraction of large quantities of threatened species.

Activity 3.2.1. Meetings with the Tuxtla Gutierrez and San Cristóbal dioceses. Work sessions will be held in an effort to jointly analyze the options for building a strategy to promote the conservation of forests and ceremonial plants among the indigenous communities of the Chiapas central Plateau. Meetings with the Interfaith Council of Mexico will also be organized to explore areas for cooperation and to recruit their support for the potential scaling-up of project outcomes. This activity also includes a survey of consumption of palms and other NTFP by Christian and Catholic churches in Mexico.

Activity 3.2.2. Producing communication materials and raising awareness among clergy regarding plants used in ceremonies. Specific communication materials will be produced and campaigns will be

organized, with the cooperation of the local churches. Environmental information sessions will be held, with the participation of the clergy and the community members involved in the festivities.

Output/Outcome 3.2. Collaborative agreements reached with Mexican Christian churches for biodiversity and cultural conservation. / Involvement and commitment of religious groups in conservation in Mexico increased.

Sub-component 3.3. Partnerships with traditional indigenous organizations to promote sustainable use of ceremonial plant species and forest conservation

This subcomponent contributes to the achievement of the outcomes described in Component 2. It involves necessary communication with the religious authorities in the indigenous communities.

Activity 3.3.1 Informational meetings with traditional and religious authorities in the communities.

At these meetings, the current status of the plants and their forest habitats will be presented; regular meetings will also be held to provide information on the progress of the project.

Output/Outcome 3.3. Local indigenous religious leaders support the conservation of plants/forests used in traditional ceremonies. / Participation of indigenous peoples in conservation initiatives for ceremonial NTFP increased.

Component 4. Project Management, Monitoring and Evaluation

The activities in this component will involve the establishment and operation of procedures and systems for project management, as well as processes for the systematization of lessons and results. It includes administrative activities, supervision, organization of information and progress reports, as well as mechanisms for evaluation and monitoring.

Sub-component 4.1. Project management

This sub-component includes planning, coordination, management, and supervision of project implementation, aimed at achieving the expected results; it also includes contracting of consultants and coordination of project staff. Most of the technical team will focus on Components 2 and 3. Project management will be carried out by the program director. In addition, a technical assistant will be hired to monitor the project; this person will be responsible for providing follow-up on indicators and for preparing reports. Pronatura Chiapas will be responsible for this sub-component, providing its own counterpart resources. A Project Management Unit (Annex 4) will be established within the current Pronatura organizational structure. This sub-component also includes Pronatura's administrative incremental costs and recurrent costs.

Activity 4.1.1. Selecting technical staff for Component 2. This activity includes drafting terms of reference and contracting the staff that will be responsible for the technical coordination and development of the project in the field. This activity is fundamental to establishing the Project Management Unit. Most of the field staff will be hired as consultants.

Activity 4.1.2. Training staff. Induction and basic management and operational training will be provided, together with a presentation and analysis of the project, to prepare staff.

Activity 4.1.3. Establishing the project management system. A project operations and management system will be established, including planning procedures, information management and reporting, selection and hiring of consultants, acquisitions, and development of job descriptions for the implementation team (the latter in relation to Pronatura Chiapas' current organizational structure).

Output/Outcome 4.1. Project Management Unit established. / Results achieved through effective project coordination.

Sub-component 4.2. Project monitoring and evaluation

Project monitoring systems will be established, based on the results and indicators outlined in the Logical Framework. A consultant will be hired as the project monitoring assistant. This assistant will provide support in organizing team and staff meetings to review activities and products; the monitoring assistant will also prepare quarterly project reports and maintain the information system,

with project indicators. Two external evaluations will be carried out, one half-way through the project and the other upon completion, to document the effects and the impact of the project. Baseline indicators will be established to this end. The evaluation will assess both process and outcomes¹⁴.

Activity 4.2.1. *Establishing the baseline.* A database with the project indicators and an information system will be established, to support the monitoring of results and outcomes.

Activity 4.2.2. *Monthly follow-up and field visits.* Each month, follow-up meetings will be held, and the Pronatura Chiapas Director and the Follow-up and Evaluation Coordinator will conduct field visits.

Activity 4.2.3. *Internal evaluation.* This will be carried out through two procedures, based on the analysis of data obtained from the monitoring system, which will compare indicators and achievements. The evaluation will assess both process and results. In the former case, the project's overall performance will be measured against planned activities and the timeframe; adjustments will be made to the timeframe in accordance with the prevailing situation. The evaluation of results will be achieved through a review of the evidence contained in documents and outcomes, as well as through field visits, and meetings with partners and communities. Pronatura will form an internal evaluation team to carry out this activity each year.

Activity 4.2.4. *External evaluation.* External evaluations will be contracted half-way through the project and at the end of the project. The consultant will analyze the results obtained and provide feedback on its design, as well as inputs for final systematization.

Output/Outcome 4.2. Effective follow up and evaluation carried out; changes implemented in the project (with relation to the baseline) systematized. / Efficient project performance achieved; project execution improved through learning and feedback.

Annex 2 contains the Project Results Framework and Indicators.

Implementation Arrangements

The project will be coordinated by Pronatura Chiapas, in close collaboration with ARC for the participation of Christian groups. The implementation partners include the communities, the University of Minnesota, and CONANP. The participants will also include the municipalities of Suchiapa, San Juan Chamula and Villaflores; Catholic and evangelical congregations; and SEMARNAT, CONABIO, CONAFOR, and the Mexican Federal Environmental Protection Agency (PROFEPA).

Pronatura Chiapas will be responsible for project implementation. The areas of this organization involved in the project will be: the Environmental Communication Center, the Environmental Enterprises Assistance Fund, the Moxviquil Training Center, and the Center for Conservation Information. The technical field team will be incorporated in the organization's Community Forestry Program, while the Management Unit will fall under the supervision of the organization's Director. All these areas have existing equipment, infrastructure and trained staff, which constitute Pronatura's contribution to the project. The Project Management Unit will be composed of a technical coordinator, a project monitoring assistant, and a technical team (three technicians for the Sierra-Costa region, one technician for the highland area, five community promoters in the palm-growing area and one indigenous promoter). Additional consultants will be hired on a part-time basis to work in the Communication Center, the Conservation and Information Planning Center, and the Orchid Garden. The technical team and promoters will be hired as consultants to the project for the time period established in each contract.

For the purpose of coordination of overall activities, Pronatura Chiapas' Office of the Director and Administration Office will be responsible for project monitoring and evaluation, as well as for

¹⁴ It is difficult to evaluate the impact of a project lasting three years. For this reason, indicators will be used to assess performance during the process, as well as to evaluate performance results with relation to goals and outcomes.

negotiations with institutions, follow-up to institutional agreements, and work agreements with religious groups, partners and co-funding institutions. The consultants hired during the three years of the project's duration will be provided office space within Pronatura Chiapas' installations. The Moxviquil Training Center for Sustainability will provide lodging and meals for the workshops and courses contemplated in the project, as well as facilitators with the appropriate qualifications.

A follow-up committee will be formed to coordinate activities among project partners; it will include representatives from ARC and CONANP, as well as churches, municipalities and communities. This committee will provide input for annual work plans; it will hold two annual meetings to support follow-up and evaluation.

The proposed Organizational Chart is found in Annex 4.

Table 3. Implementation Plan

Components/Activities	SEMESTER					
	1	2	3	4	5	6
Component 1. Knowledge management for the conservation of species used in ceremonies						
<i>Sub-component 1.1. Information and technical development for the sustainable use of the species, conservation of habitats and elaboration of technical norms</i>						
Activity 1.1.1. Promoting participatory research and knowledge sharing						
Activity 1.1.2. Building knowledge on current species distribution and the status of their habitats						
Activity 1.1.3. Determining the feasibility of the sustainable harvesting of species so as to define UMAs (extractive reserves)						
Activity 1.1.4. Seminar on religion and biodiversity in Mexico						
Activity 1.1.5. Studies on the cultural use of species for symbolic and ceremonial purposes, as well as the social organization related to the collection of these species						
Activity 1.1.6. Social assessment of the communities incorporated in the second year.						
<i>Sub-component 1.2. Strengthening the regulatory framework for management and the guidelines for certification and sustainable management</i>						
Activity 1.2.1. Establishing criteria for the sustainable management of each group of species						
Activity 1.2.2. Integrating technical standards proposals						
Activity 1.2.3. Presenting proposals for improving Official Mexican Standards						
Component 2. NTFP Cultural Participatory Management Plans						
<i>Sub-component 2.1 Participatory Planning</i>						
Activity 2.1.1. Planning workshops, meetings and field trips with social groups and territory owners, aimed at defining management areas						
Activity 2.1.2. Community agreements and distribution of benefits						
Activity 2.1.3. Integrating community plans for species management						
<i>Sub-component 2.2. Strategies for managing non-timber forest products for ceremonial use</i>						
Activity 2.2.1. Technical assistance for species management						
Activity 2.2.2. Training a community-based technical team						
<i>Sub-component 2.3. Training on local organizational development</i>						
Activity 2.3.1. Working sessions and meetings to support organization processes and to strengthen producers' organizations						
Activity 2.3.2. Workshops, courses and exchanges to build capacity among the groups involved in improving species management						
Activity 2.3.3. Regional fora with traditional Mayan representatives of the ecoregion						
Activity 2.3.4. Regional meetings of xate palm producer communities						
<i>Sub-component 2.4. Environmental communication and education</i>						
Activity 2.4.1. Designing targeted communication strategies according to species and stakeholders						
Activity 2.4.2. Producing materials, conducting environmental communication campaigns and carrying out environmental education						
<i>Sub-component 2.5. Incentives and alternative mechanisms for conserving sites and species</i>						
Activity 2.5.1. Identifying incentives for landowners						
Activity 2.5.2. Negotiating conservation strategies with landowners						
Activity 2.5.3. Establishing municipal or community conservation areas						
<i>Sub-component 2.6 Sub-Projects to develop community experiences in management, propagation, production and marketing of non-timber species.</i>						
Activity 2.6.1. Establishing criteria and sending out calls for proposals for sub-project selection						
Activity 2.6.2. Providing support and follow-up on community sub-projects						

Component 3. Partnership Building with Religious Groups for Conservation and the Promotion of Fair Markets					
<i>Sub-component 3.1. Partnerships with religious congregations to promote fair trade in the United States and Europe</i>					
<i>Activity 3.1.1. Producing events and materials for promoting church participation in nature conservancy actions</i>					
<i>Activity 3.1.2. Establishing agreements for fair and sustainable trade with Christian congregations in the U.S.</i>					
<i>Sub-component 3.2. Partnerships with religious faiths in Mexico to promote the adequate management of species used in ceremonies</i>					
<i>Activity 3.2.1. Meetings with the Tuxtla Gutierrez and San Cristóbal dioceses</i>					
<i>Activity 3.2.2. Producing communication materials and raising awareness among clergy regarding plants used in ceremonies</i>					
<i>Sub-component 3.3. Partnerships with traditional indigenous organizations to promote the sustainable use of ceremonial plant species and forest conservation.</i>					
<i>Activity 3.3.1 Informational meetings with traditional and religious authorities in the communities</i>					
Component 4. Project Management, Monitoring and Evaluation					
<i>Sub-component 4.1. Project management</i>					
<i>Activity 4.1.1. Selecting technical staff for Component 2</i>					
<i>Activity 4.1.2. Training staff</i>					
<i>Activity 4.1.3. Establishing the project management system</i>					
<i>Sub-component 4.2. Project monitoring & evaluation</i>					
<i>Activity 4.2.1. Establishing the baseline</i>					
<i>Activity 4.2.2. Monthly follow-up and field visits</i>					
<i>Activity 4.2.3. Internal evaluation</i>					
<i>Activity 4.2.4. External evaluation</i>					

e. Risks

The negative forces affecting natural forests in the project areas result from a combination of need-driven human interventions and a lack of recognition of the value of these forests. The project will work to develop a series of monetary and non-monetary incentives that will generate a positive move toward conservation.

There are some risks that have to be considered in this approach:

1. If ex situ propagation of NTFP becomes a reality, the incentive to conserve forests will disappear. Although ex situ propagation is possible using tissue culture (in the case of bromeliads, orchids and cycads) and nurseries (in the case of palms), to date these technologies have not been developed for the selected species. In the case of palms, seeds must be collected in the wild to permit the establishment of nurseries; on the other hand, tissue culture is not yet an accessible technology for communities. The project will promote understory *in situ* enrichment in order to create a positive incentive for habitat conservation.
2. The interest and participation of religious groups is not enough to reduce deforestation and the degradation of biodiversity. The combined actions proposed in the project are expected to generate broader conservation outcomes, including new conservation sites, reforestation, value-added products, ethical values, social cohesion, increased partnerships, political support, legal mechanisms and public support, thereby contributing to conservation in a innovative manner.

3. Sustainability

The project will establish mechanisms for increasing sustainability in several areas:

1. **Institutional sustainability.** By establishing, supporting, and strengthening local organizations in the communities, the project will build local grassroots capacity to manage natural resources and solve internal conflicts over benefits sharing.
2. **Legal framework.** The project will address the issue of legal norms and procedures to improve the control, evaluation, and management of threatened species, thereby helping to

create favorable conditions for legal trade and commercialization, and for domestic regulation that recognizes and supports indigenous rights and endangered flora.

3. **Extractive reserves, incentives, and agreements.** By defining the conditions for harvesting wild plants, value will be added to both the species and their forest habitats. Incentives such as market opportunities, certification, and environmental services payments will support conservation efforts in the long term.
4. **Market linkages.** In the case of palms and possibly other species, establishing linkages between buyers (religious consumers) and producers (communities) will help maintain fair trade and sustainable practices beyond the culmination of the project.
5. **Religious alliances.** The alliances established among religious organizations and the environmental sector will continue after the project, increasing people's awareness and participation in conservation.
6. **Investment.** Based on the project's results, the potential for other donors and investors to continue to support efforts to develop linkages among communities and religious groups, such as the ICCR (Interfaith Center for Corporate Responsibility), will increase.

4. Replicability

The project will demonstrate the importance of the symbolic value of wild plants, and its potential for fostering conservation actions. The methodologies applied in the project and the lessons learned could be applied in many regions of Mexico and Central America where similar situations exist. The project will also increase public and government support for the management and conservation of non-timber species in Mexico, and will facilitate linkages among faith and conservation groups. This, in turn, can lead to the generation of other initiatives, as well as to the replication of this effort in other areas. Based on project results, opportunities for scaling up to the national level will be considered. For example, since religious actors are the main buyers of palm leaves in Mexico, the project will explore the possibility of creating pilot projects to test the feasibility of an equitable and sustainable palm market that links producers more closely with consumers. By creating such linkages the project will promote the development and implementation of community strategies, based on actual trade opportunities, for managing forest resources. This experience may help to generate comparable strategies in other parts of Mexico and Central America where there are similar cultural, environmental, and socioeconomic conditions.

The involvement of ARC will not only provide the opportunity to learn from other experiences around the world; it will also allow ARC to develop and apply new approaches to working with religion and conservation, in particular linked to the use of ceremonial wild species, thereby leading to the generation of new projects in other parts of the world based on these experiences.

The project will include activities designed to facilitate replication, such as the seminar on religion and conservation (Component 1), the regional workshop of traditional indigenous leaders (Component 2), and the organization of materials, meetings and events with faith groups (Component 4). The budget includes a description of the cost for each activity.

5. Stakeholder involvement

Involvement of Stakeholders in Project Development

The activities of Pronatura Chiapas in the forestry sector—including sustainable management initiatives for timber and non-timber products—have increased in the project regions over the past five years. Pronatura and its project teams maintain very close collaboration with practically all the relevant stakeholders and communities through: diverse forest management activities in the field (assessment of potential sustainable use of forests, advice on forest management and on the production of non-timber products); organization of periodic academic events (e.g. five workshop during 2004 on communal forestry); and participation in governmental decision-making commissions in the forestry

sector (e.g. Pronatura is a voting member of the Chiapas Forest Council, where forest management plans, regulations, wildfire prevention measures etc. are approved.)

The project design process builds on these collaborative institutional linkages. The process began with consultations to prepare a request for a Project Development Facility Grant (PDFA) to elaborate a medium-sized project (MSP), with the active participation of diverse actors.

The actors who participated in the project design workshops are:

- **Rural community groups and organizations:** Tierra y Libertad, Sierra Morena, Capitan Luis A. Vidal, CESMACH (A total of 17 communities, mainly Tzeltal, Tzotzil and mestizo communities, participated in the consultation workshops. See Social Evaluation Annex.)
- **Religious groups:** San Cristóbal de las Casas Diocese, Alianza Evangélica de los Altos de Chiapas, Consejo Latinoamericano de Iglesias, Lutheran World Relief, Iglesia Luterana Evangélica de América, Alliance of Religions and Conservation;
- **Commercial intermediaries, gatherers and buyers:** La Flor de Catemaco, Continental Floral Greens
- **Governmental entities**
- **Municipal Authorities:** Villaflores, San Juan Chamula and Suchiapa
- **State Authorities:** State Ministry of Rural Development; Natural History and Ecology Institute, Ministry of Indigenous Peoples
- **Federal Authorities:** Wildlife Directorate of SEMARNAT, PROFEPA, CONAP, CONAFOR
- **Universities and Research Centers:** Minnesota University, Universidad Autónoma de Chipingo México.
- **International NGOs:** The Nature Conservancy; Conservation International, Rain Forest Alliance
- **International Organizations:** Commission for Environmental Cooperation (CEC)

Activities were initiated in 2004, first for the design of the PDF-A, and later for the integration of the MSP. Institutional linkages with stakeholders and actors previously established by Pronatura Chiapas facilitated their participation throughout the project design process.

The following activities were completed:

Workshop on project concept integration	October 2004
Workshop on project component analysis	April 2005
Participation in a Fair Trade meeting with churches (Chicago)	October 2005
Meeting on palm regional strategy (Pronatura-Conanp)	December 2005
Visit from US churches to palm-producing communities	January 2006
Workshop on sustainable palm marketing	January 2006
Community workshops for the diagnosis and evaluation of priorities for sustainable palm marketing	January-February 2006
Workshop for the integration of the project's logic framework	February 2006
Meetings and consultations with San Juan Chamula and Villaflores authorities	May 2005, October 2005, February 2006

During these workshops and meetings, issues related to current natural resources use and its effect on wild populations, management options, supply and demand, dates and resource-use periods, supply chains and commercialization were discussed and analyzed; official regulations and norms were also considered. The actors involved in this process expressed their interest in and commitment to participating as project counterparts or partners.

In addition to formal workshops organized during the project design stage, other activities have been developed in the communities of Capitan Luis A Vidal, Tierra y Libertad and Sierra Morena, including an event to exchange experiences. Pronatura has experience working with the communities where the project will begin to be implemented over the first 6 months. Consultations with the communities being incorporated into the project will be completed during the first semester, in order to produce a social evaluation.

Roles and Responsibilities of the Various Stakeholders

ARC will be the main entity responsible for ensuring the necessary contacts with religious groups interested in supporting and promoting the project's activities.

SEMARNAT, CONANP and PROFEPA will have important roles, and their principal responsibility lies in the application of the information derived from the project to improve regulations on non-timber forest products. Pronatura already collaborates with these institutions through its work on the *xate* palm. The project will provide an additional impulse to these initiatives, particularly with regard to the definition of sustainable harvesting areas in Biosphere Reserves.

The University of Minnesota has provided and will continue to provide information on supply of and demand for palm in the US. It will also facilitate religious-sector involvement in the implementation of pilot projects and commercialization.

The Nature Conservancy will continue to support community development processes in the sierra and coastal regions of Chiapas, as well as in the state's Biosphere Reserves. This is major institutional counterpart addresses sectors or thematic areas that strengthen the project, even though these areas are not considered explicitly within the project's scope.

Municipal authorities (religious, constitutional, traditional) will contribute through their leadership and advocacy for the implementation of the project. Their responsibility will be to provide institutional support for the establishment of the pilot activities according to their expressed commitment.

Pronatura Chiapas has responsibility for the coordination and liaison with stakeholders, as well as a supporting management role in the relations among producers, religious entities, commercialization groups and environmental authorities (SEMARNAT). In addition, Pronatura will be in charge of the administration, monitoring and systemization of the whole process.

Involvement of Marginal Groups

In addition to its biodiversity conservation objectives, the project has been devised to involve marginal and disadvantaged communities. In general, non-timber products are harvested by the poorest members of the community and are inadequately valued. The cultural-values approach will allow the benefit of non-timber products to society to be widened. The project will also allow work with indigenous communities within their traditional governing frameworks, taking into account cultural and religious concerns.

The backbone of the project lies in promoting informed participation by and capacity building within the communities involved to improve biodiversity use and increase the social and economical benefits of NTFP for populations living in marginal conditions.

The service vocation of the participating churches constitutes an additional guarantee that the project will widen benefits for the population.

For Pronatura and most of its participants, it is clear that the project must be targeted to: improve capacities in the rural communities that produce and use natural resources; develop and implement demonstrative examples; and establish formal agreements through which consumers can support the productive or commercialization processes of indigenous groups and marginal rural communities. Community groups, social organizations and consumers have already participated in numerous activities related to the design of the project.

Indigenous Peoples Strategy

The project will work with indigenous peoples, in particular Mayan groups (Tzotzil and Tzeltal) from the Chiapas Highlands, specifically the indigenous communities of San Juan Chamula and Aguacatenango. During the design phase, the project included consultations with municipal authorities from San Juan Chamula and visits to Aguacatenango, as well as consultations with rural communities

of the Sierra Madre de Chiapas. Annex 10 lists the rural and indigenous communities selected for the first year of implementation.

The project will support the development of indigenous traditions, as well as of indigenous governance, by promoting the conservation of non-timber ceremonial species. The project will not implement any action that excludes indigenous practices; on the contrary, it will collaborate with the participating communities to identify means of countering the loss of local biodiversity and, consequently, the degradation of the local cultural heritage.

In order to ensure effective communication and understanding of cultural dimensions, the project team members working directly with the indigenous populations will be indigenous and bilingual (Mayan-Spanish) natives from the Chiapas Highlands region. In the case of San Juan Chamula and Aguacatenango, *cuc nichim* working commissions will be established to ensure the participation of these traditional groups in project development. The project will be presented to traditional and religious authorities as well, in order to obtain their feed-back and guidance. In this way, the project will simply provide input for the definition of management and conservation strategies that the communities will design themselves.

Through the project, it is expected that indigenous communities will derive benefits for the conservation of their culture, as well as economic and social gains. Specifically, the project will contribute to improving the communities' organizational and planning skills. Since its foundation in 1993, Pronatura has conducted several projects in indigenous communities (Mayan, Zoques, Choles). Pronatura's proposes that the project begin by constructing an inter-cultural dialogue in the locations where the strategies will be designed to promote knowledge sharing and understanding of the local problems. For this reason, the project will follow the indigenous calendar, allowing the participants to work with the communities according to their calendar of festivities and in appropriate timeframes, as determined by the traditional authorities. Pronatura will only proceed with project activities upon informed consent by the communities. The use of images and information that are considered part of a community's heritage will be preserved as such, and will not be disseminated to third parties or used in project reports.

Annex 10 contains the Indigenous Peoples Planning Framework and Annex 12, the Stakeholder Map.

6. Monitoring and Evaluation Plan

The project's Monitoring and Evaluation Plan (M&E Plan) is based on the establishment and monitoring of key input, output and outcome indicators. The attached Log Frame Table (Annex 2) presents a summary of the performance, outcome, and output indicators, including the project timing for outputs and impact assessments.

Given that the project addresses a relatively new field of endeavor, qualitative outcomes will be as important as quantitative results with regard to biodiversity conservation. While the project will increase both the area under management and the protection measures for threatened or endangered non-timber species, it will also contribute to generating a platform that will enable the active participation of other sectors—sectors that are barely involved in conservation, such as churches and religious groups within indigenous communities—in the sustainable management of biodiversity and cultural diversity.

Component 5 includes activities related to the design and implementation of the project's monitoring and evaluation plan. During the first four months, a baseline for these indicators will be established and integrated into a database to permit follow-up. Monitoring will be the responsibility of the monitoring assistant, under the supervision of Pronatura's offices of the Director and Administration. The project's Technical Coordinator will be responsible for the development of work programs at the field level, and for supervising the technical team.

The monitoring and evaluation plan will work with progress (or performance) indicators, as well as with results indicators. The first set of indicators will focus on how the project has been implemented,

the sequence of activities, coordination with project partners and the outcomes produced; the second set of indicators will focus the evaluation on assessing the results achieved, both in quantitative and qualitative terms.

Qualitative indicators refer to the actors' perception of the relationship between religion and conservation. Quantitative indicators will measure results in two major areas: conservation (area under management, number of saplings produced, area under conservation, resource mobilization for conservation purposes and technical norms accepted into legislation); and local capacity building (increase in revenues from palm commercialization, community organizations established, community promoters and people trained).

The M&E plan includes the following activities:

1. Establishment of the baseline for each indicator
2. Development of the monitoring and reporting system
3. Two field visits by the internal monitoring team per year
4. Interviews and surveys among participants to evaluate qualitative and quantitative changes (yearly follow-up meetings, two surveys within the project's timeframe)
5. Output records and verification reports included in the project files
6. Outcomes evaluation based on indicators at the end of the project
7. Quarterly internal planning and follow-up meetings
8. Field visits to verify new conservation areas

Table: Reporting Plan

Report	Frequency	Responsibility
Technical Progress Reports	Bi-annual (activity reports)	Pronatura Chiapas A.C.
Financial Reports	Bi-annual	Pronatura Chiapas A.C.
Annual Progress Reports (technical, indicators, procurement and acquisitions)	Annual	Pronatura Chiapas A.C.
Mid-Term Review		World Bank
Implementation Completion Report		World Bank and Pronatura
Audit	Annual	Pronatura

D. FINANCIAL MODALITY AND COST-EFFECTIVENESS

Financing Plan

Annex 7 (Financial Management and Disbursement Arrangements) and Annex 8 and 9 (Procurement Arrangements, Procurement Plan) contain the assessment of Pronatura Chiapas' administrative capacity, on which the criteria and maximum rates for contracting individual consultants or consulting firms were based. The maximum amounts for community sub-projects are also indicated. Tables 4 and 5, below, show the project's total budget (by component and category, respectively)—including the total amount of contributions of each participating institution and Pronatura's counterpart—for each component and sub-component.

Table 4. Global budget by project component (in US\$)

Component /Subcomponent	GEF Contribution	Pronatura	Government	Other partners	Total
1. Knowledge Management for the Conservation of Species Used in Ceremonies	126,443	28,846	19,231	50,000	224,520

1.1. Information and technical development for the sustainable use of the species, habitat conservation and technical norms	113,462	28,846	19,231	28,846	190,385
1.2. Strengthening the regulatory framework for management, and guidelines for certification and sustainable management	12,981			21,154	34,135
2. NTFP Cultural Participatory Management Plans	546,111	129,808	367,307	233,616	1,276,842
2.1. Participatory planning	10,577	14,423	28,846	14,423	68,269
2.2. Strategies for managing non-timber, ceremonial-use species	224,183	48,077	57,692	38,462	368,414
2.3. Training in local organizational development	99,375	28,846	40,385	38,462	207,068
2.4. Environmental communication and education	24,135	19,231		14,423	57,789
2.5. Incentives and alternative mechanisms for conserving sites and species	41,346	19,231	182,692	32,692	275,961
2.6 Community sub-projects	146,495		57,692	95,154	299,341
3. Partnership Building with Religious Groups for Conservation and the Promotion of Fair Markets	96,682	4,808	19,231	172,245	292,966
3.1. Partnerships with religious congregations, to promote fair trade in the United States and Europe	68,750			133,500	202,250
3.2. Partnerships with religious faiths in Mexico	24,038			10,000	34,038
3.3. Partnerships with traditional indigenous organizations	3,894	4,808	19,231	28,745	56,678
4. Project Management, Monitoring and Evaluation	180,745	63,846	0	14,423	259,014
4.1 Project management	113,437	34,615			148,052
4.2 Project evaluation and monitoring	67,308	29,231		14,423	110,962
SUBTOTAL	949,981	227,308	405,769	470,284	2,053,342
Credit Fund additional contribution (counterpart)					500,000
TOTAL	949,981	227,308	405,769	470,284	2,553,342

Table 5. Costs by budget category (in US\$)

BUDGET BY COMPONENT AND CATEGORY	TOTAL
1. Knowledge management for conservation of species used in ceremonies	
<i>Workshops and meetings</i>	17,788
<i>Subprojects on harvesting rates and technical field activities</i>	88,462
<i>Operating costs (internal consultants)</i>	17,308
<i>Equipment GPS (goods)</i>	2,885
Subtotal	126,443
2. NTFP Cultural Participatory Management Plans	
<i>Consultants (technical staff for training of communities and planning process)</i>	147,015
<i>Workshops and training courses</i>	32,313
<i>Non-consultant services (printing and radio spots)</i>	13,462
<i>Operating costs for Component 2</i>	206,826
<i>Field expenses and per diem</i>	56,154
<i>Materials for green houses</i>	19,537
<i>Internal consultants (communication, GIS, land mechanisms technical support)</i>	131,135
<i>Subprojects</i>	146,495
Subtotal	546,111
3. Partnership Building with Religious Groups for Conservation and the Promotion of Fair-Markets	
<i>Consultants (market studies and commercialization)</i>	42,307
<i>Non-services consultants (printing)</i>	3,423
<i>Workshops and meetings</i>	25,962
<i>Operating costs</i>	24,990
<i>Internal consultants</i>	11,000
<i>Travel in Mexico City and US</i>	7,692
<i>Per diem, fuel</i>	6,298
Subtotal	96,682
4.-Project Management, Monitoring and Evaluation	
<i>Consultants (baseline, evaluation and monitoring)</i>	37,500
<i>Goods (vehicle for field activities included in component 2 and 3, computers and office materials)</i>	29,808
<i>Operating expenses</i>	113,437
<i>Administration costs, including supervision and monitoring</i>	63,821
<i>Office costs</i>	39,231
<i>Office materials and field expenses</i>	10,385
<i>Total administration costs 113,437 = 11.94%</i>	
Subtotal	180,745
TOTAL	949,981

Table 6. Co-financing

Name of Co-financer (source)	Classification	Type	Amount (US\$)	Status
Alliance of Religions and Conservation	NGO	% time of staff dedicated to Project	120,000	Committed
ARC		Travel expenses		
National Commission of Protected Areas	Federal Government	Cash and in-kind contributions, including support for nurseries, evaluation and assessments, community labor, % of CONANP technical staff dedicated to the project.	300,000	Committed
Comisión Nacional Forestal	Federal Government	In cash and in kind contribution for management plans of non-timber forest products	25,769	Committed Yr. 1
The Nature Conservancy	International NGO	Cash and in-kind contributions. Geographic and biodiversity data bases for project area. Funding for training, technical support and activities within the communities. Support for the activities leading to the establishment of protected areas	173,452	Committed
University of Minnesota	University	Cash and in-kind contributions to continue facilitating palm market development in USA and Canada	27,000	Committed
Municipality of San Juan Chamula	Local government-beneficiaries	In-kind contribution of land for the establishment of a municipal tree nursery and a ceremonial botanical garden	50,000	Committed
Municipality of Villaflores	Local government-beneficiaries	In-kind contribution—technical staff, studies related to the establishment of a protected area in Cerro Nambiyugua	30,000	Committed
Pronatura Chiapas A.C.	Project executing NGO	Cash and in-kind contributions for project operation, including communication, GIS, transportation, office equipment, information (satellite images, data bases etc), %staff working for the project. Operating and office costs.	227,308	Committed
Churches in Mexico and Chiapas	Churches	Cash and in-kind contributions for meetings, travel	38,000	Expected
University of Amsterdam	International University	Technical advice for bromeliad studies and propagation assays	5,000	Committed
Churches in USA and other sites	Churches	Cash and in-kind contributions for market expansion (travel costs, events organization, communication materials)	106,832	Estimated contribution
TOTAL CO-FINANCING			1,103,361	

Co-financing: Environmental Enterprises Assistance Fund

An additional co-financing possibility is Pronatura's Environmental Enterprises Assistance Fund, which could allocate up to US\$500,000 among different sub-projects. Each sub-project may have a total cost of up to US\$50,000 for infrastructure development or required equipment to improve community and organizational capacity. Credits will only be granted to organizations having profitable economic activities and where it can be demonstrated that the credit is a mechanism to eliminate barriers that limit sustainability. Examples of activities that the Fund could finance include the establishment of cold-storage warehouses for palm stocking, trucks for palm stocking, tourism infrastructure for botanical gardens, etc. All project funding applications presented to Pronatura will be evaluated according to the norms and procedures established in the Fund's Procedures Manual.

E. INSTITUTIONAL COORDINATION AND SUPPORT

Mexico's Country Assistance Strategy (CAS) for 2004–07 is based on four main pillars: poverty alleviation, environmental management, increased competitiveness, and improved governance. It

builds on the positive experience of the Environment Structural Adjustment Loan to revise the existing programs and incentives structures and address the implicit short-term tradeoffs between social and environmental protection. The CAS indicates that Mexico faces tremendous pressure on its natural environment, to the degree that failure to reverse some of the most damaging environmental trends will result in reduced welfare and increased poverty. In supporting the Mexican government's 2001-06 National Environment and Natural Resources Program (ENRP), the World Bank will focus on priority environmental issues over the next three years that include: sustainable development as a shared responsibility of different sectors and institutions; decentralization of environmental management and increased public participation; ensuring that beneficiaries pay for the environmental services provided; addressing the loss of tropical forests and biodiversity; and sustainable water resources management.

The World Bank-GEF program in Mexico has focused on: a) strengthening the Natural Protected Areas System; b) indigenous and community conservation efforts in Oaxaca, Guerrero, and Michoacán; and c) mainstreaming biodiversity criteria in regional development in the Mexico Mesoamerican Biological Corridor. This initiative complements efforts under the above-mentioned projects as well as the use of the tool kit developed under the Land Conservation MSP, to develop a new extractive reserve approach that seems the most appropriate strategy for a biologically and culturally rich state, where social exclusion and poverty constitute barriers to the conservation efforts of both government and civil society.

The project will promote synergies with other projects and programs, taking stock of the recently completed self assessment of national capacity for the implementation of the global conventions and initiatives operating in the region. It also will consider carefully the national and international instruments and regulations, specifically the International Labor Organization's (ILO) Convention 169 on indigenous and tribal peoples, the recently revised World Bank policy on indigenous peoples (OP/BP 4.10), the Official Mexican Standard 059 on endangered and protected species, as well as other Mexican laws and regulations on wildlife, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and Article 8(j) of the Convention on Biological Diversity.

Additionally, other groups are developing strategies to promote the diversified use of tropical forests, as many of the latter are fragmented and the current timber extraction practices are not sustainable. The Forest Stewardship Council and Rainforest Alliance are developing mechanisms and certification standards for target species in an effort to promote sustainable markets. This project assumes that over the next few years, there will be greater interest in non-timber forest species and communities will obtain additional benefits by participating in these initiatives.

The World Bank's Indigenous Peoples Policy (OP 4.10), adopted in July 2005, recognizes that indigenous peoples are commonly among the poorest and most vulnerable members of society, and that in many countries they have not fully benefited from the development process. It also recognizes that the identity, culture, land, and resources of indigenous peoples are uniquely intertwined with and especially vulnerable to changes caused by development programs. The policy considers that the knowledge and culture of indigenous peoples are vital to their survival and sustainable development, and encourages partnerships among the private sector, governments, and indigenous peoples to promote development programs, including investments in various initiatives of indigenous groups as well as capacity-building programs.

The policy states that the Bank's broad objective for indigenous people is to ensure that the development process fully respects their dignity, human rights, economies and cultures. More specifically, the policy requires that Bank-financed projects include measures to avoid potentially adverse effects on indigenous peoples' communities, or, when avoidance is not feasible, to minimize, mitigate, or compensate for such effects. Bank-financed projects are also designed to ensure that indigenous peoples receive social and economic benefits that are culturally appropriate as well as inclusive with regard to gender and generation.

Environmental Assessment. This project is classified as Category B, the appropriate classification for projects that involve natural habitats but do not lead to their loss or degradation (as is explained in BP 4.04, Paragraph 2). This category is consistent with most other conservation and natural resource management projects in Latin America and the Caribbean. In accordance with Mexican Legislation, a

management plan including baseline studies, population dynamics, and calibration of methods to determine best management practices, extraction quotas and mitigation of any anticipated impact on the habitat or other species will be prepared and submitted for the approval of the Environmental Authority¹⁵ as part of the project activities.

Preparation of the EA has included a number of public consultations on the project design (including environmental aspects) with a broad range of stakeholders, including representatives of *ejidos*, indigenous communities, and individual landowners; conservation NGOs; religious congregations; civil society groups; business people; and relevant national, state, and local government entities. (See Stakeholder Involvement on page 32, and Annex 6: Environmental Assessment.)

Natural Habitats and Forests. The project is fully compatible with both the Natural Habitats OP/BP 4.04 and the Forests OP/BP 4.36. The World Bank's Forests Policy, adopted in November 2002, builds on the lessons learned in developing its Environmental and Rural Development Strategies. The new policy provides the basis for proactive engagement with client countries to broadly address the challenges of sustainable forest management, biodiversity conservation, and maintenance of ecosystem services from forests. The policy encourages community forestry with consideration for social and poverty issues and encourages certification as a means of ensuring environmental quality. The project will not support any clearing or degradation of forests or other natural habitats. On the contrary, it is designed to promote the conservation and restoration of forests and other mature natural vegetation through sustainable harvesting of non-timber products using biodiversity friendly practices that contribute to the conservation of their habitat; it will also improve the livelihoods of communities and reduce pressure on their surroundings by limiting the need to expand collection areas.

Pest Management. The project does not bring into play the Bank's Pest Management Policy (OP 4.09), because it would not (i) procure any pesticides (or pesticide application equipment), (ii) lead to increased pesticide use, nor (iii) support pest management practices that are risky or unsustainable from an environmental or health standpoint.

Involuntary Resettlement. The project will work with communities and *ejidos* that have expressed interest and participated actively during the preparation phase; none of these will be required to relocate their dwellings or economic activities as a result of the project or any other foreseen initiative. On the contrary, the main objective is to secure the provision of NTFP for ritual use, whether for their own religious practices or for export to other religious groups.

¹⁵ Forestry Commission, Wildlife Authority in SEMARNAT, Wildlife Units.

Annex 1. Incremental Cost Analysis

Component /Subcomponent	BASELINE		INCREMENT						
	Federal Gov	Other	Total	GEF Alternative	GEF Contribution	Pronatura	Government	Other partners	Total
<i>1. Knowledge Management for the Conservation of Species Used in Ceremonies</i>	<i>41,346</i>	<i>14,423</i>	<i>55,769</i>	<i>280,289</i>	<i>126,443</i>	<i>28,846</i>	<i>19,231</i>	<i>50,000</i>	<i>224,520</i>
<i>1.1. Information and technical development</i> for the sustainable use of the species, habitat conservation and technical norms.	36,538	14,423	50,961	<i>241,346</i>	113,462	28,846	19,231	28,846	<i>190,385</i>
<i>1.2. Strengthening the regulatory framework for management and guidelines for certification and sustainable management</i>	4,808		4,808	<i>38,943</i>	12,981			21,154	<i>34,135</i>
<i>2. NTFP Cultural Participatory Management Plans</i>	<i>205,846</i>	<i>6,731</i>	<i>212,577</i>	<i>1,489,419</i>	<i>546,111</i>	<i>129,808</i>	<i>367,307</i>	<i>233,616</i>	<i>1,276,842</i>
2.1. Participatory planning	24,038	2,885	26,923	<i>95,192</i>	10,577	14,423	28,846	14,423	<i>68,269</i>
2.2. Strategies for managing non-timber, ceremonial use species	33,654	3,846	37,500	<i>405,914</i>	224,183	48,077	57,692	38,462	<i>368,414</i>
2.3. Training on local organizational development	35,000		35,000	<i>242,068</i>	99,375	28,846	40,385	38,462	<i>207,068</i>
2.4. Environmental communication and education				<i>57,789</i>	24,135	19,231		14,423	<i>57,789</i>
2.5. Incentives and alternative mechanisms for conserving sites and species	96,154		96,154	<i>372,115</i>	41,346	19,231	182,692	32,692	<i>275,961</i>
2.6 Community Sub-projects	17,000		17,000	<i>316,341</i>	146,495		57,692	95,154	<i>299,341</i>
<i>3. Partnership Building with Religious Groups for Conservation and the Promotion of Fair Markets</i>		<i>16,346</i>	<i>16,346</i>	<i>309,312</i>	<i>96,682</i>	<i>4,808</i>	<i>19,231</i>	<i>172,245</i>	<i>292,966</i>
3.1. Partnerships with religious congregations, to promote fair trade in the United States and Europe		14,423	14,423	<i>216,673</i>	68,750			133,500	<i>202,250</i>
3.2. Partnerships with religious faiths in Mexico		1,923	1,923	<i>35,961</i>	24,038			10,000	<i>34,038</i>
3.3. Partnerships with traditional indigenous organizations				<i>56,678</i>	3,894	4,808	19,231	28,745	<i>56,678</i>
<i>4. Project Management, Monitoring and Evaluation</i>		<i>15,000</i>	<i>15,000</i>	<i>274,014</i>	<i>180,745</i>	<i>63,846</i>	<i>0</i>	<i>14,423</i>	<i>259,014</i>
4.1 Project Management		15,000	15,000	<i>163,052</i>	113,437	34,615			<i>148,052</i>
4.2 Project Evaluation & Monitoring				<i>110,962</i>	67,308	29,231		14423	<i>110,962</i>
TOTAL	247,192	52,500	299,692	2,353,034	949,981	227,308	405,769	470,284	2,053,342

BASELINE DESCRIPTION

The cost included in the baseline, consider the following:

Regular governmental programs such as; PET (temporary employment program), which pay the labor of communities in activities such as maintenance of tree nurseries, road maintenance and other. PRODERS; program for Sustainable Regional Development, which provide financial support for technical assistance and training. PPSA. Payment for Environmental Services; compensatory support that selected land owners received from the Environmental Services Fund of SEMARNAT. It also includes the estimated cost of research conducted about the species by students and researchers of ECOSUR, UNACH and others. In “others” the baseline includes the activities financed by NGOs such as The Nature Conservancy, Conservation International, Rainforest Alliance, as well as the information produced by the Commission of Environmental Cooperation, and the University of Minnesota.

INCREMENT DESCRIPTION

The increment describes the additional funding that the project will mobilize through its strategy. The increment include, support by ARC, The Nature Conservancy and The University of Minnesota, as well as additional funding provided by the National Commission of Protected Areas and the involved municipalities. (see Co-finance for details).

The analysis of incremental cost do not include the counterpart of USD 500, 000 of the Environmental Enterprises Assistance Fund, as these funds are provided in the form of small recoverable loans and credits as integral part of the project, provided by Pronatura Chiapas.

Annex 2. Results Framework Matrix

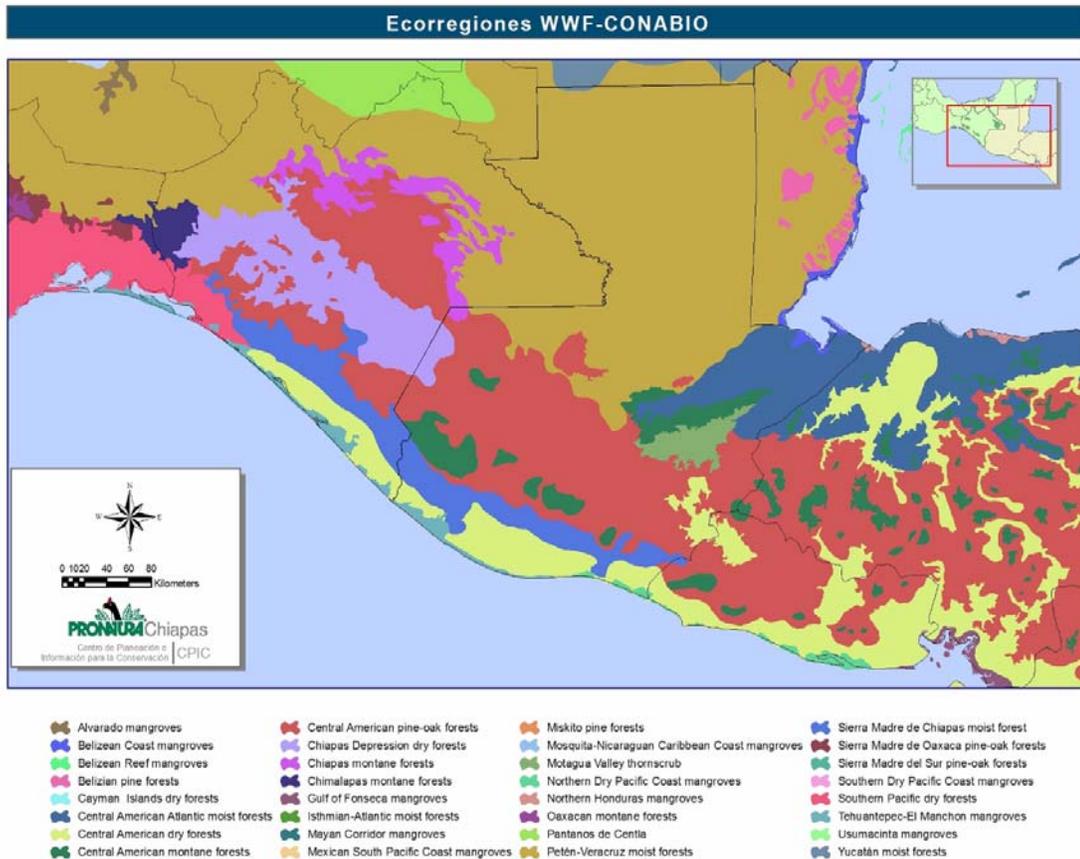
Program Development Objective/Global Environmental Objective	Outcome Indicators	Use of Results Information
<p>PDO</p> <p>Reduced pressure on endangered forest species used for religious ceremonies and improve livelihoods of local communities and partnerships with religious groups</p> <p>GEO</p> <p>Areas under sustainable management and protection status increased, in sites of ecoregions of global importance in Chiapas.</p>	<p>9,000 has of natural extraction areas under best practices management for bromeliads, cycads, orchids and palms harvesting.</p> <p>75% reduction in waste of <i>Chamaedora</i> spp and 50% reduction of orchids flowers and plants loss in project sites.</p> <p>25% increase in family income of participants groups.</p> <p>80% of sustainable fair trade palm produced for Holy Week in the project communities sold to congregations in Mexico, United States and Europe.</p> <p>55, 000 hectares under enhanced protection in Biosphere Reserves (El Triunfo/La Sepultura).</p> <p>3 new extractive conservation reserves for sacred plants (cycads, orchids and bromeliads) established and managed by local communities and municipalities.</p>	<p>YR3 Demonstrate that cultural and religious values have synergies with biodiversity and can mobilize resources and participation of new stakeholders increasing social, environmental and economical benefits.</p> <p>YR3: To show that the management approach of extractive reserves and sustainable harvesting could sustain healthy populations and improve conservation of ecosystems and biodiversity as a whole.</p>
Intermediate Results One per Component	Results Indicators for Each Component	Use of Outcome Monitoring
<p>Component One :</p> <p>Legal national framework and knowledge for management improved for the conservation and sustainable use of NTFP of ritual and ceremonial value.</p>	<p>Component One :</p> <p>Sustainable harvesting rates defined for palms in Yr1 and for bromeliads and orchid flowers in Yr2.</p> <p>4 technical guidelines for species of bromeliads, palms, orchids and cycads elaborated and presented to environmental authorities</p>	<p>Component One :</p> <p>Yr2. To show the usefulness of field technical knowledge to develop adequate norms to regulate sustainable use.</p>

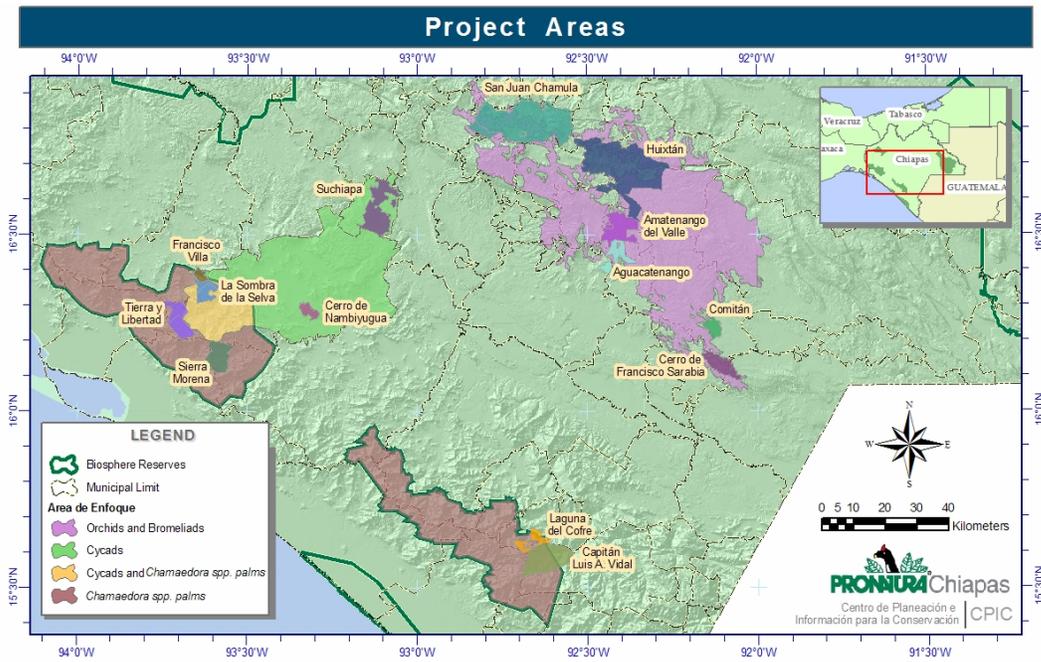
	Participant communities have legal authorization for species sustainable use.	
<p>Component Two:</p> <p>Indigenous communities and rural peasants' capacity and organization strengthened for sustainable harvesting of NTFP and conservation of habitats.</p>	<p>Component Two :</p> <p>10 communities are organized for planning, decision making and benefit sharing in non-timber resources management strategies at Yr 3</p> <p>300 people trained in techniques for non-timber species management</p> <p>1 regional organization of palm producers established Yr 3.</p> <p>At least 10 Community subprojects (i.e. botanical gardens, fuel saving stoves, programs for productive enrichment, etc) are financed and assisted by the project.</p>	<p>Component Two :</p> <p>Yr3. To show that appropriated participatory process result in an increased capacity of the communities to control and manage their on natural resources in a sustainable manner</p>
<p>Component Three:</p> <p>International and national religious groups, communities and other stakeholders' partnerships developed for sustainable consumption of forest species.</p>	<p>Component Three:</p> <p>2 religious congregations in the US participate in collaborating agreements for b-friendly and fair trade market of NTFP used for ceremonial purposes.</p> <p>Mexican Interfaith Council purchases include at least 2% of the sustainable-fair trade products</p> <p>Local and traditional religious groups establish 2 botanical gardens of ceremonial plants and promote 3 extractive reserves of sacred plants</p>	<p>Component Three:</p> <p>Yr3. To show the potential of participation of religious groups from several faiths and at various scales of intervention (local, national and international) in conservation actions.</p> <p>Yr 2. To identify the potential of the use by visitors and local peoples in cultural-botanical gardens of ceremonial plants sites as a tool to increase environmental</p>

		<p>awareness and cultural identity</p> <p>Yr. 3. To show the potential of sacred sites as a mean to increase coverage of protected areas.</p>
<p>Component Four</p> <p>Project effectively executed</p>	<p>Timely delivery of project outputs according to project implementation and financial plan.</p> <p>Monitoring and evaluation system established in the first 4 months of project implementation.</p>	<p>Yr 1-3 To assess outcomes and overall project performance and regular feedback for adaptive project management</p>

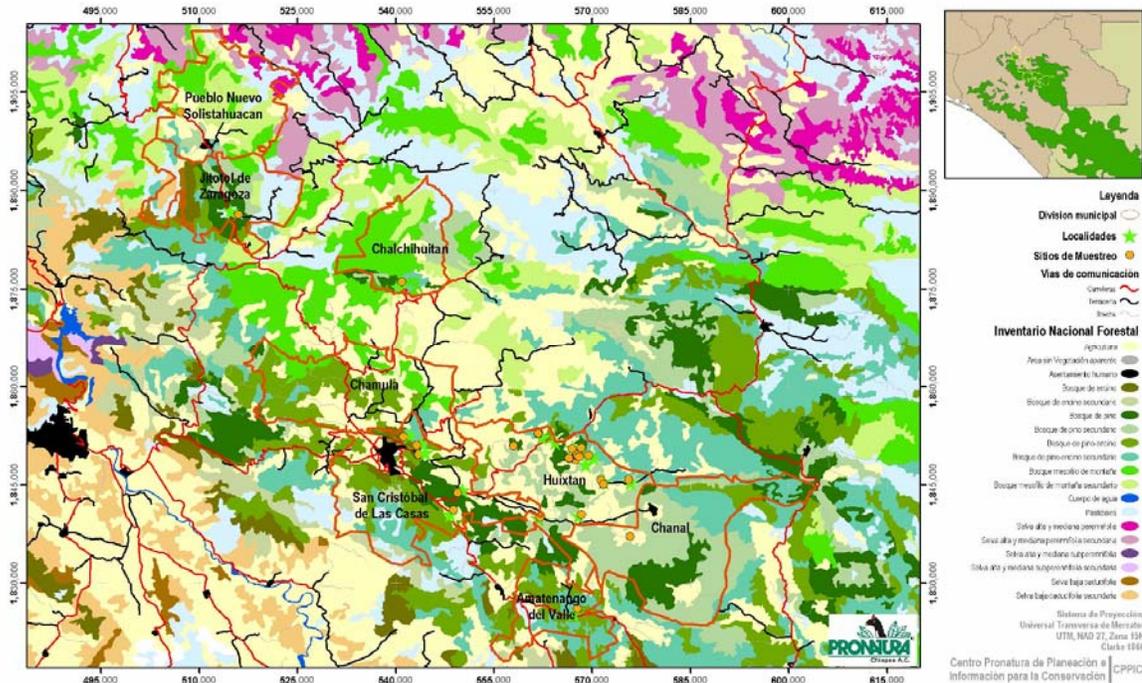
Annex 3. Maps

Map 1. Ecoregions where the Project will be implemented: Central America pine-Oak forests, Chiapas depression dry forest, Sierra Madre de Chiapas moist forest.



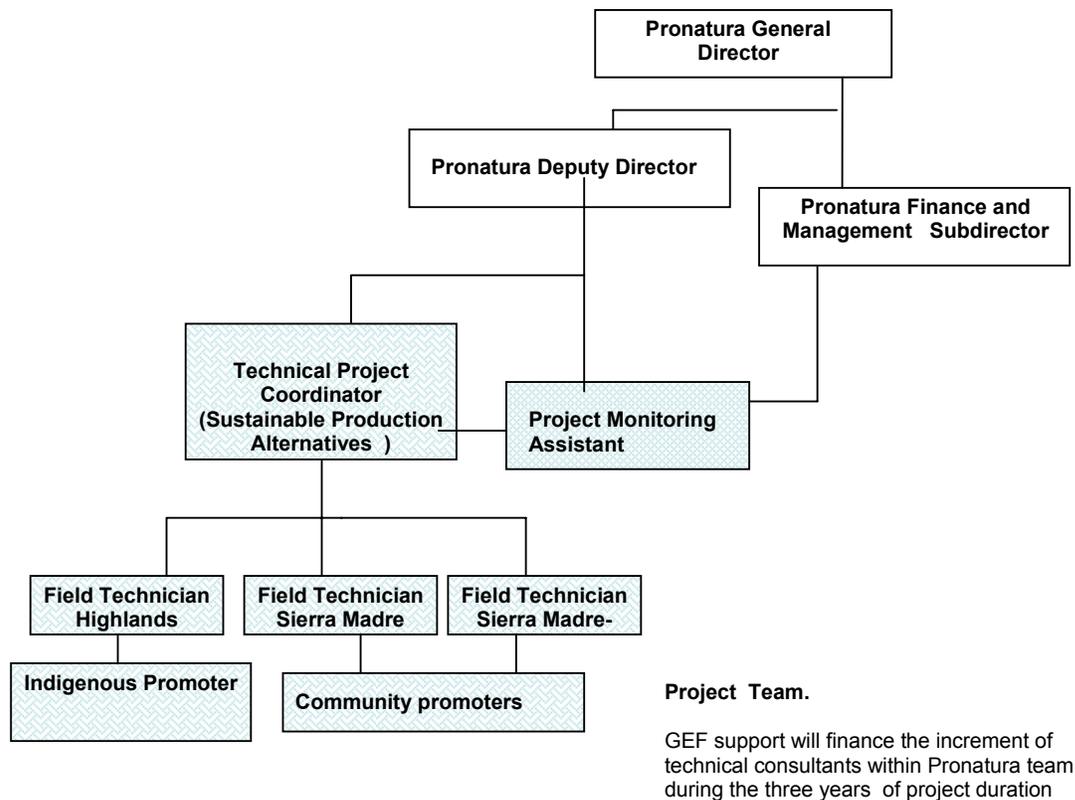


Map 2. Project locations in the Chiapas highlands and in Sierra Madre



Map 3. Pine-Oak forest associations in Chiapas Highlands and identified collecting sites of bromeliads by the cuc-nichim of San Juan Chamula

Annex 4. Project Structure



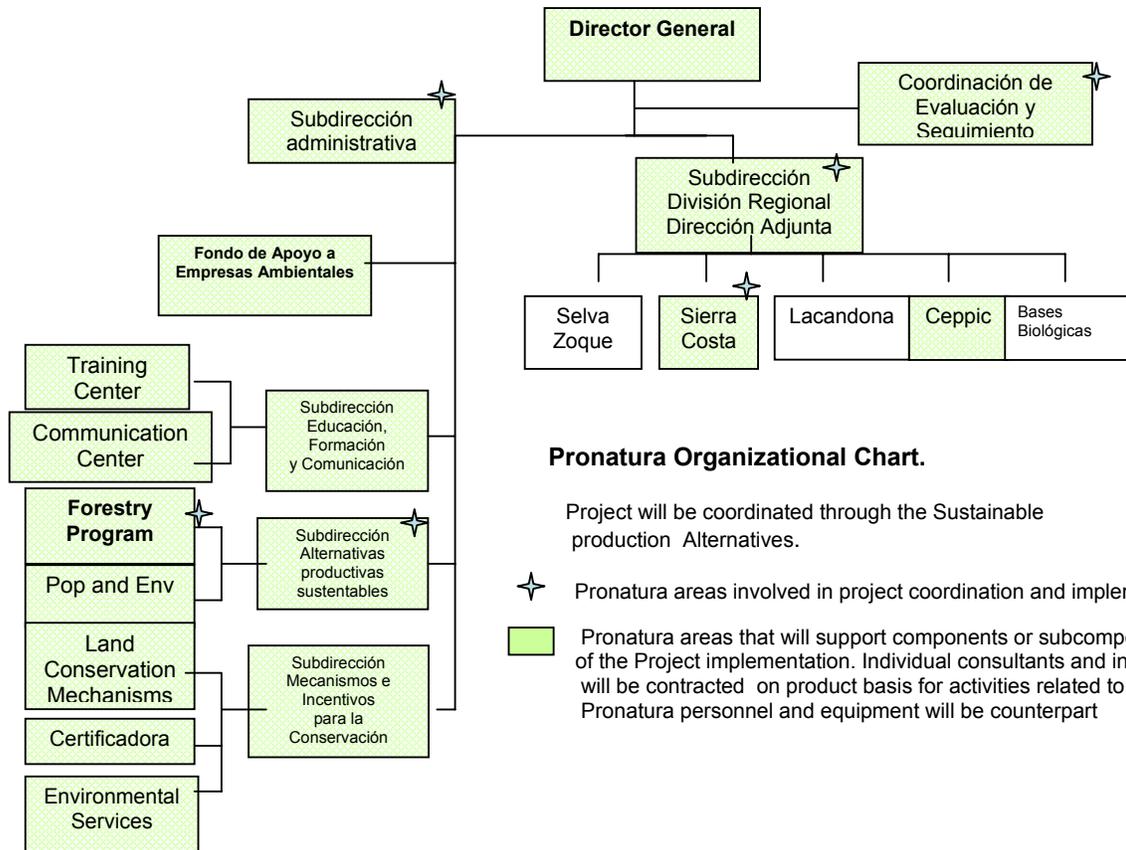
Description of Project Structure:

The Project will be mainstreamed within the current structure of Pronatura Chiapas (see next figure). Since the implementation will involve participation of several areas of the organization the project will be coordinated at the top level of the organization, with a direct supervision of the Executive Directors level.

The Directors level will be responsible for the coordination of activities with religious groups, and with the municipal authorities, as well as coordination of ARC participation and other partners. The Director level will also review the overall project progress and will be involved in the activities related with the legal framework. The Deputy Director in coordination with the Project Monitoring Assistant and the Financial Sub Director will manage the terms of reference, and supervision of consultants of component 1 and 3.

The technical project coordinator will be integrated into the Sub Direction of Alternatives for Sustainable Production, in the Forestry Program. He will be responsible for the preparation of the Annual Work plan and supervision of field activities, including conduction of participatory planning activities, coordination of technical assistance and training with the

communities. Technicians will be divided in two regions, one technician will coordinate the activities in the Highlands of Chiapas (bromeliads an Orchid), he will be able to speak tzotzil-tzeltal and understand indigenous culture. He will have support from a local indigenous promoter. Two additional indigenous promoters will be participating from Pronatura staff as required. In the case of the Sierra Madre, more communities will be involved ending after three years with 8 communities participating, two technicians will be hired for this region,. The project in this area will cover the activities on *Chamaedorea* palms and of cycads management. 5 local promoters will be selected from the communities for helping the project with follow-up activities in the field.



Pronatura Organizational Chart.

Project will be coordinated through the Sustainable production Alternatives.

★ Pronatura areas involved in project coordination and implementation

■ Pronatura areas that will support components or subcomponents of the Project implementation. Individual consultants and inputs will be contracted on product basis for activities related to those areas. Pronatura personnel and equipment will be counterpart



Annex 5. Brief Description of Pronatura Chiapas, A.C.

Pronatura Chiapas is a non-profit civil organization established in 1989, and legally constituted in 1993.

Its mission is the conservation of flora, fauna and priority ecosystems, promoting a development of the society in harmony and sustainability with nature through the time.

Pronatura Chiapas A.C. is part of a national network of Pronatura offices operating in eight Mexican states. The association is made up by a multi-disciplinary group of professionals in fields such as: Biology, Ecology, Environmental Education, Agro ecology, Administration, Accounting, Graphic design, Medicine, Sociology and Anthropology, among others. The current team is made up of 56 people

The organization is committed to seek and promote strategies for biodiversity conservation, while looking to benefit local population in terms of their quality of life, as well as strengthening their capacity for planning their development by mainstreaming environmental considerations as a major criterion . We also collaborate with national and international institutions in working networks, allowing us to share experiences with those in other parts of the world and give our support to initiatives that seek for a more equitable society. A society where development is possible for us and future generations.

Our institution does work in the following fields:

- 1.- Conservation and Sustainable Management of Biodiversity
- 2.- Alternatives for Sustainable Production (Community Forestry, Agro Ecology, Eco Tourism)
- 3.- Population and Environment (Gender, Reproductive Health, Youth development)
- 4.- Education, Training and Communication for Sustainability
- 5.- Sustainable Development and Biodiversity Conservation Planning

Pronatura Chiapas focuses on southern Mexico, as well as on projects in Oaxaca and Guatemala. The institution has developed collaborative projects with partners in Central America, and has been also requested for conducting projects of national scale.

In order to accomplish its mission, Pronatura also takes part in several forums, networks and councils, it has been appointed to be member of the following councils: the Council of Sustainable Development, the State Council on Forestry, Municipal Councils of Rural Development, Grijalva-Usimacinta Watershed Council, among others.

In addition to its programs for conservation, natural resource management and community development, Pronatura Chiapas have five strategic centers to increase impact of field work.

:

The **Center for Environmental Communication (CcoA)**, established to work in coordination with the different programs and areas of our organization, with the goal of creating, designing, producing and broadcasting our experience for diverse audiences. Media

such as radio, press and local and national television are used to this end. Printed material is produced as well as audio and video. External consulting services are also available, including access to our archives.

The **Moxviquil Training Center (Moxviquil)**, created for training and offering systematized experience to professionals and community organizations in southern Mexico. . Programs include courses, workshops, internships, student exchanges and training camps, Collaborative agreements have been established with academic institutions such as El Colegio de la Frontera Sur and the University of Colorado State. Training is offered in the following subjects; reproductive health, development planning, training of trainers, social skills for conservationist, GIS, sustainable forestry, management of protected areas, leadership, among others . Services include: classroom rentals, cafeteria services, lodging and a documentation area. These activities take place mostly in San Cristobal de Las Casas, where the Center is based.

The purpose of the **Pronatura Center for Information on Planning and Conservation (CEPIC)** is to gather, analyze and systematize relevant social, economical and of natural resources and biodiversity information, with the aim to support decision making. Products are developed for the internal use in Pronatura projects, and for the use of other conservation stakeholders (other NGOs, communities and governmental organizations) . Among the types of products , CEPIC generates geographic analysis (maps, coverage, plans, etc.), database building and design, and the application of spatial models for regional analysis. With the consolidation of this center Pronatura Chiapas capacities for supporting local and regional processes has been increased.

The **Fund for Environmental Enterprises**. It's a credit scheme that provide funding to different local initiatives of groups and organizations, principally to people in great need, so they can undertake productive projects that improve their quality of life, as long as these initiatives also contribute to environmental conservation. The scheme is flexible and seeks to meet the needs of the people. It operates as a financial component of the integrated projects that Pronatura conduct in different regions.

The **Certifier of Sustainable Agricultural Products**

Pronatura Chiapas is part of sustainable agriculture network, initiated by five NGO's in Latin America and the United States in order to give third party certification to sustainable farmers. In Mexico, this process has begun with the certification of coffee as a first step in achieving our goals.

DIRECTORY

Director General

Biol. Romeo Domínguez Barradas
romeo@pronatura-chiapas.org

Deputy Director

Biol. Rosa María Vidal Rodríguez
rosavidal@pronatura-chiapas.org

Pronatura Chiapas, A.C.

Av. Pedro Moreno 1
Apartado postal 219, C.P. 29254
San Cristóbal de Las Casas, Chiapas, México.
Tel y Fax 01 (967) 67 8- 50- 00

Annex 6. Environmental Assessment

The project is classified as a Category B project, and it is expected to have a major positive environment impact on project sites. In addition, it will have global environmental benefits by working directly with local users of highly threatened and endangered wild species, as well as by promoting sustainable practices and conservation of the entire habitats in which these species occur.

1.- Description of Environmental Assessment Process

During the preparation phase the environmental assessment was conducted through the following activities and inputs:

1.- Integration and analysis of a general geographic data base of vegetation types, population information and land use in the project areas. The basic GIS developed for the project also includes field data about potential areas of distribution of the selected species, as well as the identification of priority sites for conservation of pine-oak forest in the Chiapas Highlands. Data obtained was confirmed with the ecoregional planning team for the Central America Pine-Oak forest.

2.- Compilation and review of published literature and technical documents about the use of species and current ecological situation, as well as information on distribution and species and status.

3.- Consultation with experts on palm /cycads ecology and distribution in Chiapas (Miguel Angel Pérez Farrera, University of Chiapas), on bromeliads ecology (Jan Wolf, University of Amsterdam) and orchids (Cisco Craig Dietz , Omar Rocha) for obtaining feedback on the proposed activities for the project as well as information on the feasibility of the proposed activities and their potential impact.

4.- Consultation with commercial intermediaries, and forestry technical assistance providers , including visits to the commercial plantations in Catemaco, Veracruz, of La Flor de Catemaco S.A. de C.V. These consultations were for obtaining historic information about distribution of the species and quantities that were collected in the project areas in the last 20-30 years.

5.- Field visits and workshops. Visit to the project areas to obtain information about the current conditions of the forest in the sites where collection of plants is currently taking place. These sites included the current and historic sites where cuc nichim (Chamula) collected bromeliads in the Oak and Pine-Oak forest in the Chiapas highlands as well as in the Northern Mountains of Chiapas. Aguacatenango Oak forest, where logging and fuel wood extraction are major pressures and areas in El Triunfo, la Sepultura and El Ocote, to identify the status of palm populations.

Rural participatory assessments (details are included in the social annex), were carried out to obtain information on status and trends of the populations and the quality of the forest sites. As part of the analysis that the communities performed with Pronatura's assistance, communities drafted maps integrating the areas where species populations are distributed in the community lands.

2.- Project Location

The Project will be executed in Chiapas in southern Mexico. The project will be conducted in communal and *ejido* land of rural *mestizo* and indigenous peoples, who have expressed their interest and consent to participate in the project. The area involves a great richness of cultural and biological diversity, including working in buffers zones of protected areas (Biosphere Reserves), and reducing the impact of human activities in core zones.

The proposed project will promote conservation of biodiversity and protect remnants of globally significant ecosystems (tropical montane cloud forest, tropical rainforest, and temperate pine-oak forest) through the sustainable management of non-timber species habitats and populations, which are used for religious purposes in Chiapas State, southern Mexico.

Specifically, the project will contribute to the conservation of the Mesoamerican Pine-Oak Forest Ecoregion, one of the 200 global ecoregions identified by the World Wildlife Fund, and within the Hotspot of Mesoamerica North as described by Conservation International. The Mesoamerican Pine-Oak global 200 Ecoregion is the richest subtropical conifer forest in the world. Specifically, the project will contribute to the conservation of the Central America Pine-Oak forest and the Sierra Madre del Sur Pine-Oak Forest, as well as the conspicuous Ecoregion of the Chiapas Depression dry forest.

3. Ecological significance of the project

The total number of species known to exist in Mexico is approximately 65,000. Together with Brazil, Colombia and Indonesia, México is among the countries with the most species wealth. Some 26,000 species of plants, 282 of amphibians, 707 of reptiles and 439 of mammals have been identified and described as native to Mexico. These figures make Mexico a mega-diverse country, with at least 10% of all biodiversity on earth (Mittermeier and Goettsch, 1992¹).

The state of Chiapas in southern Mexico is extremely rich in biological and cultural diversity. There are over 8,000 species of vascular plants, which represent almost one third of all plants and more than half of higher plants, and 19 vegetation variations under major ecosystems such as deciduous forests, cloud forests, tropical rainforests, and mangrove swamps.

The project will contribute to the conservation of mature forest in the following ecoregions:

- Central America Pine-Oak Forest Ecoregion
- Sierra Madre del Sur Pine-Oak Forest Ecoregion
- Chiapas Central Depression dry forest.

The World Wildlife Fund has stated that the “Central America Pine-Oak Forest Ecoregion harbors a complex and diverse set of natural communities and represents a crossroads for groups of plants and animals from Mexico and Central America. Many of the plants that grow here are endemic, and this region supports one of the world's richest assortments of conifers. These forests cover a broad volcanic mountain range and contain scattered islands of broad-leaf evergreen cloud forests emerging at higher elevations. This ecoregion is dominated by a rich assemblage of pines and oaks, and it marks the southern limit of many groups of plants from North America.”

The Sierra Madre del Sur “is an unparalleled center of endemism and biodiversity in Mexico. Many of the 350 species of orchids in this region can be found nowhere else in the world. The same is true for many other species of plants, birds, mammals, amphibians, reptiles, and insects such as beetles and butterflies. This is one of the richest areas in butterfly species in the Mexican Pacific, with more than 160 species including the Pacific dotted-blue and Pacific orange tip butterflies. The mosaic of forest types in this ecoregion contributes to its astounding diversity.”

“The Chiapas Depression is a dry forest valley in southern Mexico and western Guatemala, crossed by the Alto Grijalva River system and surrounded by mountainous terrain and pine-oak forests. Variations in altitude create amazingly diverse habitats for nearly 1,000 different plant species adapted to dry conditions. Many of the plants and animals that live here can be found nowhere else on Earth. And because this region lies on a convergence zone, it contains an unusual mix of species that come from both the Caribbean side and Pacific side of the continent”².

¹ Mittermeier, R. and C. Goettsch. 1992. “La importancia de la diversidad biológica de México”, in CONABIO, *México ante los retos de la biodiversidad*. México, pp. 57-62.

² WWF. “Global 200, Priority areas for conservation, Terrestrial ecoregions of the world”. *National Geographic*.

The groups of non-timber products selected for the project are bromeliads, cycads, *Chamaedorea* palms, and orchids. These plants are currently used by Mayan traditional and *mestizo* communities in several regions of Chiapas during various festivities.

Table 1. Species selected for the project

Species	Habitat	Status
Bromeliaceae <i>Tillandsia eizii</i> <i>Tillandsia guatemalensis</i>	Mature pine-oak forests of the Central American Pine-Oak ecoregion	Endemic to Chiapas and Guatemala. The situation of the plant populations is unknown.
Chamaedorea <i>Chamaedorea quezalteca</i> <i>Ch. ernesti-agustii</i> <i>Ch. Oblongata</i>	Subtropical coniferous forest of the Sierra Madre de Chiapas ecoregion. Tropical rainforests of the Veracruz-Peten moist forest	Threatened. NOM-059-SEMARNAT-2000
Orchidaceae <i>Laelia superbiens</i> <i>Oncidium leucochylus</i>	Oak forests of the Central American Pine-Oak ecoregion	CITES II, <i>Oncidium leucochilium</i> (Tanal), <i>Laelia superbiens</i> (Candelaria) Threatened. NOM-059-SEMARNAT-2001. Endemic to Chiapas, Guatemala, Honduras.
Cycads <i>Dioon merolae</i>	Dry tropical forest of the Chiapas Central Depression ecoregion	Endemic to Chiapas. Endangered species (UICN, 1997) NOM-059-SEMARNAT-2001.

The project will create an opportunity for Mexican and international conservation experts to examine and discuss the global biodiversity significance of the selected species, as well as the religious/cultural dimensions of their use and the conservation priority of the rich mountain habitats on which they depend. This is important because current knowledge about the status of wild populations of many species is not adequate to reliably assess the degree to which they are threatened.

The *Bromeliaceae* are the second most abundant vascular epiphytes and the second most representative in Tropical America, and they are not found in their wild form in other continents (Lüttge, 1989)³. The species used for religious purposes are of the genus *Tillandsia*. The 2004 IUCN Red List of Threatened Species includes 25 species of *Tillandsia* worldwide, most of which are reported by a single author in Ecuador. In Chiapas alone there are 101 *Tillandsia* species reported in mountain habitats, most of which are endemic and found in tropical, old-growth, montane forests that are rapidly disappearing. Wolf (2004)⁴ states that the few available guidelines for harvesting these ornamentals have serious shortcomings when the species do not fall under the CITES agreement (7 species only).

We expect that field work will contribute to update the limited data currently available on this southern Mexican genus eventually adding many more species to the IUCN Red List and other conservation references, by including the information collected on bromeliad species in the project (*Tillandsia eizii* and *T. guatemalensis*).

Xate, as the various species of the palm genus *Chamaedorea* are generically known, is found in Chiapas in midland and tropical rain forests and tropical montane cloud forests. Wild populations are

³ Lüttge, U. 1989. Vascular Plants as Epiphytes. Evolution and Ecophysiology. Springer-Verlag. Germany, p. 270.

⁴ Wolf, 2004. "Making rational use of ornamental bromeliads as a tool for forest conservation and community development in Latin America". Project document.

being extracted from the Biosphere Reserves of El Triunfo, Montes Azules and La Sepultura, among other locations.

Palm species collected for commercial use and income generation in the communities include: *Chamaedorea quezalteca*, the wild population of which is distributed in the Sierra Madre cloud forest; *Chamaedorea graminifolia*, found on the Pacific slope in areas of midland forest; *Chamaedorea ernesti-augustii*, under great pressure and found in midland forest in the lowlands rainforest region; as is *Chamaedorea oblongata*. Wild populations of all of these palm species are considered threatened in Mexico, according to the standard NOM-059-ECOL-2001.

The main orchid species in the project that are collected from the wild are *Osmoglossum pulchellum* (highlands), the highly endangered *Oncidium leucochilum* (Amatenango del Valle area), and *Laelia superbiens*, endemic to Chiapas, Guatemala and Honduras. Populations of this species are distributed in mature oak forests near Comitán, which is part of a corridor of the ecoregion⁵. These orchids area catalogued as threatened in the standard NOM-059-SEMARNAT-2001, in addition to being included in the CITES II. Only the orchid flowers are collected.

The cycads species registered in the project area are *Cerastozamia norstogii*, *Dioon merolae*, and *Zamia soconuscensis*, all of which are endemic and considered to be in danger of extinction, according to Mexico's official list of threatened species (NOM-059-ECOL-2001). The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) lists the entire taxa in Appendix 1, its most endangered category, which sets the strictest limitations on the import or export of any specimens of these plants.

Bromelias Tillandsia spp

There is certain background information available on bromeliads used in San Juan Chamula for traditional celebrations throughout the year. In 1986 Pronatura established the Huitepec Biological Reserve, which is a fragment of cloud forest, a ceremonial site used by Tzotzil communities, and where *Tillandsia guatemalensis* populations exist. Between 1998 and 2000, Pronatura Chiapas conducted propagation and seed gathering assays of *Tillandsia eizii*, with groups of *cuc nichim* (flower gatherers) from San Juan Chamula; seeds were planted in communities and in the Huitepec Reserve. Based on that experience, the *cuc nichim* recognized that plants actually take more than 13 years to reach maturity and reproduce, while common beliefs hold that these plants take only one year to grow. Furthermore, Dr. Jan Wolf⁶ has conducted and promoted various studies on the ecology of the species (Castro, 1997, Tarin, 1998, Armandillo, 2004), which could support estimations on sustainable harvesting in the forests of the Chiapas highlands, aimed at establishing UMAs or extractive reserves.

In addition, these studies could also help develop more adequate official standards for some species of the genus *Tillandsia* in Mexico.

San Juan Chamula municipal authorities have recently shown interest in promoting conservation actions, particularly reforestation, protection of springs, and mature forest conservation in the Tzontehuitz peak, and initial collaboration with Pronatura has been established.

Chamaedora palms

Palms of the genus *Chamaedora spp* are collected in, and exported from various states in Mexico. Most of the foliage used in the cut greens trade originates in Mexico and Guatemala, with the largest

⁵ Carrera, T.Ch, 1999. *Orquídeas de Chiapas*. Consejo Estatal para la Cultura y las Artes, Gobierno del Estado de Chiapas, pp. 107 and 175.

⁶ Wolf was a researcher at the Colegio de la Frontera Sur (College of the Southern Border) and currently works as a researcher at the University of Amsterdam, where he continues to lead studies on the ecology and conservation of epiphytes, specifically bromeliads.

percentage coming from Mexico, although seeds and potted plants are produced outside those two countries. The reasons are largely economic in nature. To produce the foliage outside of their natural areas of occurrence would require an investment that would raise costs above what could be justified by the prices paid for the foliage. In North America, outside Mexico, in addition to cost considerations, climatic conditions would not allow for the production of the foliage. Current (2002).

The greatest volumes of palms come from the states of Veracruz, Tamaulipas and Chiapas (close to 500 tons annually). In 1999, the Mexican government granted permissions to collect 2000 tons of palms in the country. The economic spillover from marketing palm was estimated at 2 million dollars for that year.

In Chiapas, 29 communities in the Sierra Madre de Chiapas extract palm. Furthermore, on the border with Guatemala, *xate* workers collect the palm from the rainforests and market them in the state of Tabasco. Many of these communities are located in buffer zones or near core areas of the La Sepultura and El Triunfo Biosphere Reserves.

Marketing has invariably been carried out by a network of local intermediaries that has developed on the basis of personal or family relations. This network includes key players in the communities, making it possible to ensure palm volumes. At the same time, a very dependent labor relation has been created between palm workers and the local intermediary, which has led to the latter exercising great influence both in pricing policies and in selling conditions. This has had an inevitable impact on wild populations. Prices have stagnated for several years, around 4 pesos for a roll of 72 leaves.

The marketing scheme has lacked incentives with regard to quality, leading palm collectors to deliver leaves of all sizes and quality. The effect has been to provoke inadequate cutting techniques, leading to the over-exploitation of the wild populations of *cameador* palm, largely favored where its combined with absence of access rules and the lack of internal regulation enforcement. The absence of technical support for the communities is one of the major constraints for improving this deficiency.

In this context, the National Commission on Protected Natural Areas (CONANP) has promoted the management of *cameador* palms in some communities, in order to reduce extraction pressure in core areas. CONANP identified the need for a regional approach to the management of palms, in order to organize a greater number of communities and respond to market demand, promoting a code of good practices and management. Pronatura has collaborated in strengthening the social groups involved in El Triunfo and La Sepultura communities.

Resources provided by CONANP to promote natural resource management activities in protected areas also contribute to the project baseline. These resources come primarily from two official programs: PRODERS (Regional Sustainable Development Program) and PET (Temporary Employment Program), which have already funded the implementation of some *Chamaedorea* spp. palm nurseries. On the other hand, the National Forestry Commission provides funding to enable communities to hire forestry technical services so they can elaborate management plans.

With regard to market arrangements, the North American Commission on Environmental Cooperation (CEC) and the University of Minnesota conducted market studies (Current, 2002)⁷, in which churches were identified as end point consumers and in which commercial chains were described. Continental Floral Greens, the main importer in the U.S. and the business affiliated to Flor de Catemaco in Veracruz, has shown interest in making the chain more efficient, thereby enabling producers to obtain greater benefits. In Holy Week 2005, test trading was carried out through an agreement between the churches and Continental Floral Greens. Price differentials for the communities reached \$2.50 USD more per roll than local intermediary prices.

Beginning in 2003, Pronatura began feasibility studies of forest management in the La Sepultura and

⁷ CEC, 2002. *En busca de un mercado sustentable para la palma sustentable. [In search of a sustainable market for sustainable palm]* University of Minnesota, Report of the Commission on Environmental Cooperation.

El Triunfo Biosphere Reserves, identifying the potential for sustainable harvest of *Chamaedorea* palms in some communities. However, deficiencies were reported in organization, decision making regarding access to forests, leaf management, and relations with buyers.

It is worth noting that one problem faced by camedor palm trading is that a significant volume is sold illegally, causing some intermediaries to encounter legal problems.

Problems were also encountered in defining criteria for drafting management programs, and in extraction notices presented to environmental authorities. In several cases, permits had been cancelled by PROFEPA (Mexican Federal Environmental Protection Agency), as a result of the above mentioned anomalies.

Other initiatives are currently underway. Conservation International, for example, is working in the Lacandona rainforest area, conducting population studies of camedor or *xate* palm. Rainforest Alliance is supporting collector organizations in Guatemala, and the importer has been approached to promote sustainable palm, based on the identification of its place of origin.

These initiatives are being developed with few resources and linkages, thus limiting the possibility of a broader impact, at the market level, among rural communities, and on natural populations.

Orchids; Laelia superbiens, Oncidium leucochylum.

Orchids are one of Chiapas' most important resources, with nearly 600 known species, distributed in various ecosystems. Although there is much potential for sustainable use of orchids for tourism or the flower industry, projects involving communities in orchid management have not been implemented in Chiapas.

There is little information on the current situation of the populations of the orchid species selected for the project, namely *Laelia superbiens* and *Oncidium leucochylum*. It is reasonable to predict that they are at serious risk, as the forests in which they live are being transformed for firewood and charcoal production. Indigenous communities in the Chiapas highlands depend on firewood as their main source of energy fuel.

The communities value these plants during flowering, although they are not protected when the trees are cut down for fuel or lumber. Dozens of orchids die on the ground each week. Both species have very specific habitat restrictions. They live in oak groves and areas within forests with unique humidity, light and wind conditions.

In (2003), Pronatura legally register a Wildlife Management Unit in the category of Botanical Garden, of an orchid collection. The Orchid Garden is a program aimed at recovering and conserving orchid samples, and promoting them as an economic alternative for rural communities. The collection currently houses 1500 individuals of 450 species, and has developed knowledge on their management and propagation. The garden has inadequate infrastructure that does not permit its use for training or propagation, thus constituting one of the main problems in the use and promotion of the collection.

In addition, The Nature Conservancy, El Colegio de la Frontera Sur, Pronatura Chiapas and other partners have begun the process of planning the Central American Pine-Oak Forest ecoregion. This information constitutes an important baseline of data and maps of the geographic distribution of the forests and habitats of both bromeliad and orchid species. Additional information such as demographic data, land use, land tenure, and municipal territorial limits has been compiled at Pronatura Chiapas' Conservation Information Center (CEPIC) and can be consulted in project files.

Cicada Dioon merolae

Farrera (1994, 1996) has conducted various studies on population distribution and propagation patterns of this species, thus providing a baseline of biological and ecological knowledge that will

enable the project to move forward.

At the end of the 1990's, nurseries were promoted in several communities of the El Triunfo and La Sepultura Reserves, aimed at conservation and marketing. However, the lack of technical assistance and training of the communities limited the development of this initiative.

Authorities in the municipality of Villaflores where the Cerro de Nambiyugua is found and where cycads have traditionally been collected for the Suchiapa *fiesta*, have shown interest in establishing conservation regulations and mechanisms. Furthermore, groups of collectors in Suchiapa and Villaflores have held conversations with staff from the La Sepultura Biosphere Reserve, aimed at building a strategy to reduce the impact of traditional collecting and to contribute to the conservation of the species and its habitats. Project counterparts are the Diocese of Tuxtla Gutierrez, the municipalities of Suchiapa and Villaflores, CONANP and the Autonomous University of Chiapas (UNACH).

4. Pressures

Populations of selected species of bromeliads, palms, orchids and cycads, as well as their habitat have a series of pressures resulting from the human activities in the area.

In the project sites deforestation and land use change affect important areas of fragile ecosystems. This process is a result of the following causes

- Alteration of habitat, mainly for agriculture and livestock, agrochemical pollution
- Population growth and expansion of urban frontiers towards forested areas.
- Over-exploitation of wild species, well over its natural carrying capacity.
- Introduced exotic species.
- Illegal logging, plagues and forest fires.
- Floods, droughts and hurricanes.

Chiapas has the second richest biodiversity of any state in Mexico and more than 70 percent of its territory has potential for sustainable forestry, yet it has the highest rate of deforestation in the country, losing some 50,000 to 70,000 hectares of forest per year.

Biodiversity is concentrated in areas of high marginalization and poverty, where current survival options are limited to slash-and-burn agriculture and the over-exploitation of natural resources. Forest fires, demographic pressures, and the low value attributed to the use of biodiversity lead to processes of environmental and social degradation. The same forces that generate poverty also deplete natural resources and biodiversity.

However, each case which the project will address, presents specific causes that affect wild populations.

Evidence of the transformation and loss of habitats is the fact that in the last 10 years, the traditional areas for harvesting bromeliads used by indigenous people from San Juan Chamula, have moved to more than 100-200 kilometers from the center of town. While in the past, plant collection took place in the forests of the neighboring municipality of San Cristobal de Las Casas, barely 20 kms. away, it currently occurs in the municipalities of Huixtan and Pueblo Nuevo (see map of bromeliad collection routes), due to habitat destruction.

In the case of cycads species used in the May 3rd festivities in Suchiapa, the community used to make their pilgrimage to an area with extensive cycad populations in the Cerro Nambiyugua, municipality of Villaflores. Currently collection sites have shifted toward the La Sepultura Biosphere Reserve, located more than 50 kms. away

Processes are related to the following:

- Peasant collectors and indigenous religious traditional groups are unaware of the magnitude of the degradation process of habitats and non-timber species populations used for religious and cultural practices.
- Science has deficiencies in information of the biology and ecology of species, their current status and carrying capacity.
- There is also a limited understanding of the cultural practices and ritual use of NTP.
- Lack of adequate regulation, partly due in turn to a lack of knowledge on the biological/cultural dynamics. A compounding problematic issue is the limited Institutional Coordination among the levels of government and sector agencies.
- Deterioration of living conditions and subsequent social capital reduces the capacity of communities to effectively organize a rational use-commercialization and/or regulate the access to NR.
- In the cases where communities have access to markets –through intermediaries-, lack of appropriate harvesting and handling techniques reduce the value of the collected plants and their capacity to timely deliver quantity, quality demanded.
- People of faith who use non-timber species in their religious and cultural practices are unaware of the magnitude of the degradation processes. Consumers frequently ignore where the plants come from and the social and ecological impact of trade.
- Deficient information for markets and thus lack of involvement of religious communities lead to a failure of markets and a low demand for biodiversity-friendly and fair trade certified products.
- Lack of incentives for land owners of pristine forest where ceremonial species are found frequently lead to land use change for uses with higher opportunity cost as agriculture, and charcoal and firewood production.

One of the weakest points is the legal framework for the management of non-timber species. Regulation of the harvesting of epiphytes is weak and insufficient; Wolf (2005) points out that the official Mexican Standard (NOM-005-RECNAT-1997) for the extraction of bromeliads allows the harvesting of 50% of the individuals in a colony or group of bromeliads. This standard clearly does not protect bromeliads from depletion. This same standard is applied to orchids and ferns, regardless of species or types of habitats. Furthermore, in the case of species with some conservation status, management must be carried out under the Wildlife Law, and a Wildlife Management Unit should be promoted. Currently, the social groups who carry out these practices are unaware of the existence of a legal framework, and plant use continues to take place with free access.

In accordance with the latest reform of indigenous rights (Official Daily Gazette of 14 August, 2001), Article 2, section A, sub-section VI of the Constitution recognizes the right of indigenous peoples and communities to their autonomy in the preferential use and enjoyment of the natural resources found where they live and occupy land, except in strategic areas. The General Law for Sustainable Forestry Development, Articles 147 and 105, refers to the cultural uses of forest resources, mentioning species with medicinal, nutritional uses; it also provides for intellectual property rights, but there are no references to the ceremonial or religious use of plants.

Another problematic issue that has been identified is the limited coordination between the federal and state governments. The National Forest Commission, which is responsible for implementing forest policy in the country, lacks the resources to support the development of strategies for managing non-timber species. There is no working relation between this agency and the institutions responsible for the development of indigenous peoples either. Furthermore, the environmental sector institutions have not established collaboration links with the churches.

The commercial potential of the *xate* palm is unique in that international demand already exists and marketing chains and routes are already well identified. The fact that these palms are grown under ecological requirements of shade and humidity, combined with the existence of an established market, can in turn generate incentives to conserve the fragile forests where these species live.

In the specific case of bromeliads, in which the entire plant is collected and used, or in which the flowers are collected before they produce seeds, the wild plant populations used for ritual purposes are threatened by the harvest and over-exploitation prior to flowering and seed dispersal, thus precluding the completion of the life-cycle of the individuals and affecting the size of the populations.

In the case of cycads and palms, only the leaves are used. Nevertheless, lack of understanding about life cycle and best harvest methods affect the populations, as over-exploitation inhibits the natural regeneration of the plants. According to Pérez-Farrera and Vovides (2002)⁸, forest fires are also a major threat to cycads.

In the case of orchids, in which only the flowers are used, excessive logging for firewood and charcoal is reducing the habitat of these species. This oak forest hosts a unique set of plants and animals endemic to the Central American temperate forest ecoregion.

Owners of the forests that contain this biological diversity have other land use options that are economically more profitable than conservation. In recent years, however, payments made by collectors to landowners have increased, indicating that landowners could opt to conserve their property if it were possible to create an economic option based on these plants.

Each of these species represents specific habitats as well as specific degree of pressures, use and management conditions applied by the cultural and religious groups, which generate technical, social and cultural complexity for the project. For this reasons, the project will work with the above mentioned selective list of species. The project will focus on the more threatened species and on biologically richer habitats. As such species are sensitive to the quality of the habitats, their adequate management implies biodiversity conservation as a whole.

Therefore the project activities have been conceived themselves as an integrated plan to reduce the causes of ecosystem degradation.

5.- Planned activities and environmental impact.

Component 1.-Knowledge Management for the Conservation of Species Used in Ceremonies

The activities planned under this project component will contribute to increase and update the knowledge about the current situation of non-timber species (orchids, bromeliads, cycads and palms), aimed at improving management, conservation and regulation mechanisms. The studies would not affect species populations or have any impact on their habitats.

Component 2.- NTFP Cultural Participatory Management Plans

Based on the information gathered as well as on participatory planning exercises, the project will build the capacity of the participating communities by providing training, technical assistance, environmental awareness activities and advisory for the establishment of conservation easements and extractive reserves. The project will increase individual skills and will strengthen social grassroots organizations in order to improve natural resources management and to reduce human impact on wild species and their habitats. The project will also develop incentives for conservation and offer new opportunities aimed at increasing the benefits derived from the use of biodiversity by local communities. This component is expected to have a positive impact on the environment and biodiversity, because it will develop sustainable harvest methods and indicators for improving both community and local institution involvement.

Subprojects

⁸ Pérez-Farrera and Vovides, 2002. The ceremonial use of the threatened “espadaña” cycad (*Dioon merolae*, Zamiaceae) by a community of the central depression of Chiapas, Mexico.

The subprojects will support local initiatives for improving environmental and social conditions. The projects will be selected based on environmental and social criteria; and supervision from Pronatura team will ensure that any potential damage on the environment will be minimized.

Positive list

Individual sub-projects not exceeding US20k equivalent that could be supported under this component will include activities that contribute to reducing gathering, consumption and waste, adding value without increasing extraction, complying with legal requisites as management plans, land use planning and creation of community reserves, botanical gardens, nurseries and repopulation programs, such as:

- establishment of species nurseries,
- reforestation, composting, organic and biologic pest control
- repopulation of non-timber products within the natural forest,
- office and transport equipment for community producers organizations
- equipment and improvement of facilities for selection and packaging
- fuel saving stoves and sustainable management of fuel wood,
- materials for improving processing of palms products, improvements on palm selection and reducing waste of foliage during the gathering,
- establishment of community protected areas and
- community/municipal botanical gardens (for educational and tourism purposes).

Negative list

Sub-Projects that could be supported under this component will not include:

- individual proposal above US20k equivalent
- clearing of natural forest for any kind of activity
- new buildings or improvements to existing facilities that imply the expansion of the existing area.
- nurseries or plantations of exotic species
- any logging related activity, plan, equipment, etc.
- procurement of any pesticides or pesticide application equipment

Screening

The subprojects could be identified and promoted by any of the stakeholders involved and materials informing about this possibility that will be distributed in the communities include the specified environmental requirements.

Community project selection and implementation will be carried out during the second and third years. By then, the project unit and the subproject plural technical committee, responsible for technical assessment and environmental screening will be fully operational.

During preparation, the technical capacity of the multidisciplinary team in Pronatura to diligently guarantee the social and environmental safeguard compliance was deemed satisfactory, and was agreed that this team will be responsible for the initial screening of the proposals, including for identifying potential social or environmental impacts, the required measures to avoid, minimize, mitigate and/or compensate, making recommendations and follow up in each case.

The subproject plural technical committee, ultimately responsible for the soundness of the project and the environmental screening will include the following parties:

Member of the Board of Directors of Pronatura
Pronatura Executive Director
Technical Coordinator of the MS

CONANP member (when de request is from a community within the Protected Area)
Wildlife Dept of Semarnat

All activities under this component will require the presentation of an activities plan by the applicant organization, including information about the area in which the activities will be conducted. Pronatura will conduct field visits during project implementation to supervise the correct application of environmental and social criteria.

Component 3. Partnership Building with Religious Groups for Conservation and the Promotion of Fair Markets

Religious groups are increasing their environmental awareness and concern about the linkages between poverty and environmental depletion. Some of these groups have established alliances and networks for promoting a sustainable living that respect human beings and the creation. It is clear that religions need to be involved with the development of a more comprehensive worldview and ethic approach to assist in supporting this trend

Whether from an anthropocentric or a biocentric perspective, more adequate environmental values need to be formulated and linked to areas of public policy.

The outcomes of this project component will be positive for the environment beyond the actual activities scheduled. This component will facilitate the participation of religions as major stakeholders for conservation and sustainable development in local communities.

In the case of indigenous religions, project activities will strengthen cultural identities by promoting conservation of ceremonial plants.

In addition, this component involves activities such as workshops, market studies, meetings and communication materials. In collaboration with Christian congregations in the North, (Lutherans, Methodist and Catholics) the project will promote sustainable criteria for the purchase of palms, an equitable market and environmentally friendly practices.

In conclusion, due to the types of activities proposed in this component, an indirect positive environmental impact is expected.

Annex 7: Financial Management and Disbursement Arrangements.

Proposed Executing Agency: PRONATURA Chiapas A.C.

1.- Main conclusions.

The Bank has carried out a Financial Management Assessment (FMA), which involved ensuring that project design allows for an appropriate level of transparency, facilitating oversight and control while also supporting smooth implementation. Based on this analysis, the regional financial management team (LCSFM) has concluded the following:

- PRONATURA internal controls were verified to assess the appropriate use and exercise of the financial resources. A suitable control mechanism was found; nevertheless, this mechanism is not documented in a procedure manual of the institution. The Bank recommends to include it in order to adequately formalize, accept and divulge this practice within the organization.
- PRONATURA has an accounting system which is adequate for the financial registry of the projects operations. Likewise, the administration personnel have an adequate level of experience for the fulfillment of their duties and have experience in the management of externally financed loans (with the Inter-American Development Bank among others). However, the increase in administrative tasks in terms of financial management and acquisitions that the project implies could require the strengthening of the area with one or two additional people.
- In this respect, The Nature Conservancy Foundation is carrying out a study which objective is the establishment of mechanisms in order to strengthen the PRONATURA administrative area. Through the supervision activities, the Bank will be following up the results of the study and the implementation of the measures pointed out in it.
- With respect to the protection of information, it was found that the accounting papers and financial information is kept in a physical space that is apparently reaching its capacity limit. In this sense, PRONATURA has planned to adapt and refurbish this space so that it can store a bigger volume of information. We consider that the project should support this initiative.

2- Executing Agency:

The executing agency will be Pronatura Chiapas, which is a civil association focused primarily on conservation and sustainability projects in natural areas.

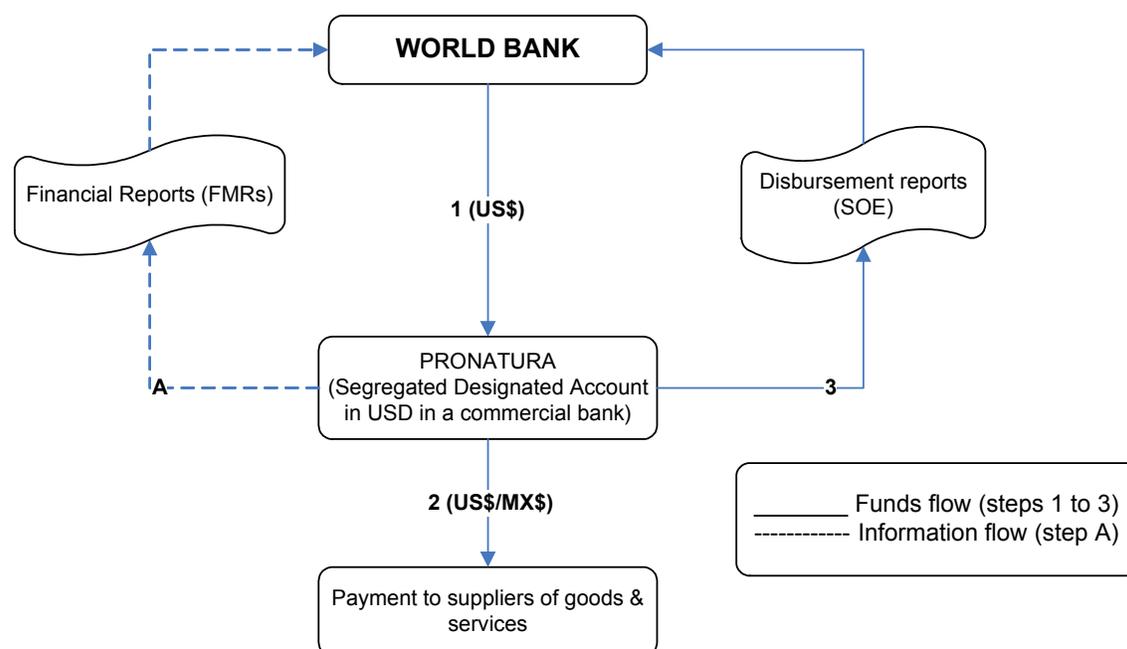
3. Project flow of funds:

PRONATURA will receive advances in a Designated Account in a commercial bank (PRONATURA has opened an account in BBVA Bancomer for this purpose) in order to make payments to suppliers of goods and services. The Designated Account will be segregated (exclusive for this project) and will be in USD, whenever PRONATURA requires making payments in pesos, they will buy pesos at the market exchange rate, and then transfer the funds into their bank accounts in pesos, in order to make such payments. For disbursement purposes, the recognition of expenditures will be upon payments to providers of goods and services.

Once payments are made, PRONATURA will apply for withdrawals from the Grant Account for deposit of advance amounts into the Designated Account. PRONATURA will report the expenditures paid from the Designated Account by presenting SOE reports at the intervals specified by the Bank.

If ineligible expenditures are identified in (i) any external or internal audit review; or (ii) any Bank supervision mission, the Executing Agency will have to reimburse the entire amount of funds corresponding to ineligible expenditures to the Bank.

The following diagram presents the proposed flow of funds for the project:



4.- Internal Control.

As part of the mission, a verification of the institution controls to assure the adequate use and exercise of the financial resources was conducted. As a result, it was found that there is an adequate control mechanism, because of:

- The payments to providers of goods and services are normally made through checks which are emitted by the administrative direction.
- In order to proceed with the emission of check it is a requisite to fill out an application form which is signed by the technical area that applies for the payment and the director of the administrative area.
- The checks have to be signed jointly by a member of PRONATURA and one member of the Board of Directors of the institution.
- Occasionally and when circumstances require it, payments are made through electronic transfers with the authorization of the President of the Board of Directors and the General Director of PRONATURA. However, this procedure was found not to be documented in the procedure manual of the institution, therefore we recommend to include it in order to adequately formalize, accept and divulge this practice within the organization.

5.- Key Financial Management Staff.

There is an administrative direction in which five people work: two public accountants, one administrator and two administrative assistants.

The director of the area has an extensive experience and has worked with PRONATURA for the last six years. The rest of the personnel have at least one year of experience in the institution.

The accounting area has experience with credit management granted by international financial institutions. At present, PRONATURA is managing a loan from the Interamerican Development Bank, as well as other institutions (USAID, WWF, Packard Foundation, etc.).

6. Accounting Policies and Procedures.

PRONATURA prepares its accounting records using two electronic systems (CONTPAQ for accounting registries and CHEQPAQ for bank registries). These systems are considered to be acceptable for the financial information management of the project, as they have the capacity to manage accounts that are classified by component and / or category, separate from the rest of the accounting, as well as the emission of reports with this information.

Within the administrative area there is a person responsible for the preparation and monitoring of the budget. Every year a strategic 5 year plan is carried out in PRONATURA, this includes an income and expenditure projection for each technical area of the institution. This budget is periodically monitored, so as to verify the differences between planned and real flows. It is important to mention that considering that 80% of the institutions' income results from donations, it is not too reliable to project any future income.

The institution has a designated bookkeeping area, however this area has to be arranged and strengthened, for which it is necessary to readjust the spaces and acquire office furniture in order to fulfill the projects needs.

7.- Financial Reporting and External Audit.

Financial Monitoring Reports (FMRs) will include financial and disbursement information in a format agreed with the Bank. The FMRs will be submitted on a semiannual basis.

PRONATURA will deliver every year financial statements of the Project, which will be audited by an audit firm accepted by the Bank. On this respect, the Bank will evaluate the possibility of the external audit being carried out by the firm which at present carries out the audit of the organizations financial statements and which is the same that audits the project financed by the Inter-American Development Bank.

In a timely manner the Bank will provide PRONATURA and the external auditors designated to the project the terms in which the financial reports should be prepared and carried out.

The first audit report will include the financial statements of the PDF A phase of the Project (\$50 thousand USD) and the financial statements of the MSP phase of the project until the end of the year 2006.

8.- Disbursement Arrangements

Statements of Expenditures (SOEs). It is contemplated that disbursements will be using traditional SOE reports, which format has been agreed with PRONATURA. SOEs limits will be established by the Disbursements Department of the Bank (LOA), based on their assessment of the project.

Designated Account (DA). For this project, the Executing Agency will establish in a Commercial Bank a Segregated Designated Account in USD for the project (grant). The Designated Account will be used to advance funds to PRONATURA to process payment to suppliers or consultants. See flow of funds and information charts.

The following table shows the allocation of grant proceeds:

Table A. Allocation of Grant Proceeds

Component	Financing Percentage	Allocation of Grant Proceeds (US\$ M)	Description (Use)
Component 1. Knowledge Management for the Conservation of Species Used in Ceremonies	100%	126	Consultants, non-consultant services, workshops, subprojects and goods
Component 2. NTFP Cultural Participatory Management Plans	100%	546	Consultants non-consultant services, workshops, subprojects, operational costs
Component 3. Partnership Building with Religious Groups for Conservation and the Promotion of Fair Markets	100%	97	Consultants, non-consultant services, workshops, operational costs
Component 4. Project management monitoring and evaluation	100%	181	Goods, Consultants, operational and administrative cost. Administrative cost is 11.94% included in this component
TOTAL		950	

Annex 8. Procurement Arrangements

Introduction

1. Procurement for the proposed project would be carried out in accordance with Bank's "Guidelines: Procurement Under IBRD Loans and IDA Credits" and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, and the provisions stipulated in the Grant Agreement. Goods and works procured under the diverse categories, as well as consultant services are described in a general way in the following paragraphs. For each one of the contracts to be financed with resources of the donation, the procedures of contracting or the method of selection of the consultants, the need of pre-qualification, requests of prior review, will be agreed between the executing agency and the Bank in the Procurement Plan. This Procurement Plan will be updated annually or as to reflect the actual Project implementation needs and improvements in institutional capacity
2. The executing agency of the project is PRONATURA Chiapas A.C., a civil, not for profit, association and therefore does not pursue a financially profitable relationship, which has been instituted to comply with the civil code of the State of Chiapas. The procurement under the project are not regulated by the Federal Laws (*Ley de Adquisiciones, Arrendamientos y Servicios del Sector Público y Ley de Obras Públicas y Servicios Relacionadas con las mismas*) but are considered commercial relations among individuals by the commercial and civil legislation of the United States of Mexico and particularly those applicable to the State of Chiapas.
3. The procurement methods for goods and non consultant services, works and consultant services are described further below. Table A. suggests the thresholds to be used in the Procurement Plan and in the Operational Manual for the diverse methods of contracting services and individuals for the project.
4. This annex also treats the Capacity Assessment in Procurement of the Beneficiary.

Procurement Methods

5. Procurement under de Project include specified activities in four components, (1) study and workshops to complete the base of knowledge for the management and the certification of the non-timber forest products, (2) promotion and technical aid to the organizations of producers, including community sub-projects, (3) activities of diffusion, institutional alliances and promotion of markets, and (4) coordination, monitoring and evaluation of the project.

Procurement of works

6. Under sub-component (2.6) sub-projects, may include small works, such as greenhouses, the establishment of a trail, or the repair of structures such as greenhouses and out buildings. These works will be part of the sub-project and will be procured through administrative procedures based on comparison of written quotations from qualified contractors . For small works, costing less than US\$5,000, direct contracting will be acceptable.

Procurement of goods, non-consultant services and expenses for training

7. The grant will finance a vehicle for the supervision and monitoring of the project, GPS devises, communication devices and smaller items such as tools and implements that the beneficiaries will buy, for the sub-projects, through comparison of written quotations. For small purchases under subprojects costing less than US\$5,000, direct contracting will be acceptable. PC's and other electronic devises, software and office equipment will be procured by PRONATURA through shopping (comparison of written quotations). Non consultancy services, mainly the contracting of installations and other

services for the execution of workshops, training and dissemination of the experiences will be procured through administrative procedures that include the direct contracting of available installations and payment for each participant as defined in the Operating Manual. Thus the Operating Manual should detail the maximum cost of each participant in relationship to the type of workshop, training or seminar; this cost will be able to be brought up to date periodically subject to agreement with the Bank. Non consultant services may consider also communication strategy including materials or dissemination and training, as well as the GIS products, when produced in house will be subject to the same procurement method. In this case the matrix should identify proportional cost of personnel, materials and travel, to make them eligible. It is also considered under this category, “Reimbursable expenditures of the grant recipient”, as stated in the guidance for MSP principles when financing services⁹ “The grant recipient or any sub-recipient may use its own personnel to undertake activities or provide services rather than to contract with a third party”. This principle is applied to NGOs as Pronatura Chiapas A.C. Record of time actually spent and other documentary proof would be available to justify reimbursable expenditures.

Selection of Consultants

8. Consultant services will be procured using Bank’s guidelines and include studies, workshops, analysis and specialized advisory; no consultant services over US\$100,000 are expected.

9. Firms: All the contracts for firms will be procured QCBS procedures. Contracts for assignments of standard or routing nature to cost less than US\$60,000 equivalent may be procures LCS or using other method agreed in the Procurement Plan.

10. Individual consultants: Specialized advisory would be provided by individual consultants and hired in accordance with the provisions of paragraph 5.1 to 5.3 of the Consultant Guidelines and according to provisions in the Procurement Plan.

11. Operating Cost. Office utilities, small refurbishing, and sundry items, will be financed by the project and procured using PRONATURA’s administrative procedures which were reviewed and acceptable to the Bank.

Sub-projects

12. The sub-projects will be carried out with members of the community through an agreement to support the sustainable management of the selected species. The sub-projects will be submitted by the communities, groups of communities, social organizations, NGO’s or academic institutions or in response to a call for proposals which comply with the technical criteria and objectives of the project detailed in the Operational Manual. These sub-projects may include operative cost, goods and small works. Sub-projects will not exceed are USD \$20,000 .

13. Thresholds of Prior Review: The activities subject to prior review will be detailed in the Procurement Plan and they should include all the direct contracting except in the case of the acquisitions for the beneficiaries of the sub-projects. .

Capacity Assessment in Procurement

14. Management of the procurement cycle. PRONATURA Chiapas does not have experience in competitive biddings due to the fact that the procurement it carries out is in small amounts by request of proposals. A catalogue of suppliers the organization uses is brought up to date periodically. Procurement planning is weak due to the fact that PRONATURA works by project, each project has its budget and its own procurement requirements.. The only purchases that are done by way of consolidated are those of office material and supplies. Contracting of consultant services is coordinated with the Director of PRONATURA Chiapas and with each one of the technical areas of

⁹ Information Kit Supplements for Medium Size Projects Proposers Working with the World Bank, 1997

each project. Procurement Planning will be strengthening with the Project due to the requirement to carry out and to give monitoring to a Procurement Plan. Procurement risks are minimized due to the experience of PRONATURA and its careful management of the investments.

15. Organization and functions. The ultimate decision making body of PRONATURA Chiapas A.C. is the Executive Counsel which is elected by the associates and changes every three years, at the same time the Executive Counsel delegates the administration of PRONATURA Chiapas to a Director. The organic structure of the agency is a matrix in agreement with the organizations chartered annex, it is considered that this type of organizational structure is ideal to carry out its functions, above all in taking into account what works in the functioning of this Project. PRONATURA Chiapas counts on an administrative area that is responsible for procurement for the different projects with which PRONATURA Chiapas deals with. For procurement decisions the administrative area has to search the agreement of the Director and the technical areas responsible of each one of the projects.

16. Staff. The staff of PRONATURA Chiapas is between 55 and 60 people. This variation is due to the majority of the personnel work in functions of various projects of PRONATURA Chiapas. The permanent personnel are the directive group, the administration and operational personnel like the park rangers. In the area of administration there are five people divided between accounting and direction, with two support positions. There has been little change of employees in this area but there has been some loss of people of long time relationship with PRONATURA due to personal reasons. These losses have been replaced by qualified personal that have now been integrated in the process and are well experienced in the functioning of PRONATURA. The person responsible for the acquisitions and the elaboration and monitoring of the contracts is the deputy Administrative Director, with six years experience in this position. It is projected in the short-term to carry out a process of institutional growth that has among its main objectives the strengthening of the administrative area. The Action Plan proposed to strengthen Pronatura includes hiring a professional to support the procurement process, ideally a lawyer who can draft and review contracts for the administration unit.

17.- Files. The institution has a designated an office area for keeping the administrative files, however this area has to be improved by the support of the project, for which it is necessary to readjust the spaces and acquire office furniture in order to fulfill the projects needs.

18.- Conclusions of the risk evaluation. PRONATURA Chiapas is beneficiary from public and private contributions and donations; at the same time has the support from financial international institutions such as Interamerican Development Bank-BID. This require from the organism to be extremely careful with management of the resources, transparency and be accountable for these operations. Likewise the staffs in charge of contracts for consultants are familiarized with similar procedures of the Bank. Therefore, in consideration of the amounts and characteristics of the acquisitions that will be held under their responsibility, the evaluation risk concludes that is a medium risk operation, so will be needed an annually supervision. Aimed to mitigate the risk, the following Plan of Action is proposed:

	Description	Goal	Time frame
1	To contract a consultant to support the administrative area with experience on acquisitions and legal aspects of contracts.	To strengthen the contracts area especially in legal aspects.	At the beginning of the execution.
2	To establish in the Operative Manual a matrix of training expenditures per capita that includes a proportional value for the meeting room, basic materials, trainer expenses and food for each event.	To rationalize training expenses and encourage expenses against objectives.	Before the negotiation process and annually actualized
3	To strengthen the administrative area with furniture and equipment.	To improve the administrative documents files keeping improving the area with equipment	At the beginning of the execution.
4	Workshop: norms for the hiring of consultants.	Strengthen the knowledge of PRONATURA personnel on the Bank's norms.	Carried out on the 22nd of February, during the mission.

Procurement Plan

1. The Global Procurement Plan was agreed with PRONATURA Chiapas and it is an annex to this document. A detailed plan of the first 18 months of execution is attached

Table A: Threshold for the contract procedures.

Type of expenditure	Value of the contract (US\$)	Consultancy contract procedure	Contracts subject to previous revision
1. Goods and services (not consultancy)	>350,000	ICB	All ²
	>100,000	NCB	All ²
	<100,000	Shopping	None
2. Consultancy firms	>100,000	QCBS	All ²
	<100,000	LCS	TBD for each Plan
3. Individuals		IC	All contracts through one source and above US 25,000 Any other contract with an individual cost over US 25,000 ²
4. Contracts within subprojects		Price comparison	Any other value per capita above US200 a day.
5. Training		Operative expenses	

1. These thresholds will be revised and confirmed in the Acquisitions Plan
- 2 Are not subject to this Project.

Annex 9. Procurement Plan (first 18 months)

Cons	Type	Comp	Description	Quant	Method	Required Bank Non-objection	Estimated amount	Notes
1	Subproject	1	Study on the distribution and abundance of species of Chamaedorea palm	1	Call of proposals and selection	TOR need Bank approval	22,115	
2	Subproject	1	Study on the distribution and abundance of species of bromeliads and orchids in Chiapas highlands	1	Call of proposals and selection	TOR need Bank approval	17,308	
3	Individual Consultant	1	Study of the socio-cultural practices related to the use of bromeliads and orchids	1	3 CVs comparison of qualifications based on TORs	TOR need Bank approval	5,769	
5	Subprojects	1	Estimation of harvesting rates for different species	3	Call of proposals and selection		26,923	Call of proposal first year, competition of sub projects second year. The amount projected for this 18 plan first year is 70% of total cost (38,462)
6	Goods	1	GPS	4	Quotations 3		2,885	Quantity of items may change due to prices and quality
7	Internal consultant	1	Geographic data base for the project	1	GIS Personnel time sheet. Operational Cost		3,846	
8	Internal consultant	1	Baseline on cultural perceptions of the use of ceremonial plants for communication strategy	1	Comm. Center Personnel time sheet Operational cost		3,846	
9	Individual Consultant	1	Social Evaluation of new communities	1	3 CVs comparison of qualifications based on TORs	TOR need Bank approval	9615	Number of communities will be defined in the first and second years. Total amount projected in this plan

10	Workshop	1	International Workshop to define the best management practices of Chamaedorea spp	1	Refer to matrix of cost/ person in Operation Manual		2,404	Participants will attend from Mexico, Guatemala and USA, project will cover part of the expenses
11	Individual Consultant	1	Legal technical advise for the integration of legal and technical norms for the management of the species	1	3 CVs comparison of qualifications based on TORs		4,808	
12	Workshop	1	Seminar on religions and biodiversity	2	Refer to matrix of cost/ person in Operation Manual		4500	3 sessions of the seminar will be conducted in the first 18 months
13	Non-consultancy services	2	Maps 1:50,000 for community forestry inventories	2	GIS Personnel time sheet Operational Cost	TOR will be prepared for internal use	5,700	
14	Subproject	2	Management Plan for Oncidium leucochylum or Laelia superbiens.	1	3 CVs comparison of qualifications based on TORs	TOR need Bank approval	4,808	
15	Subprojects	2	Community promoters palms and cycads	5	selected based on skills		18,180	Promoters will be contracted after 6 months during the first year, number may change to 4
16	Individual Consultant	2	Community promoter bromeliads and orchids	1	selected based on skills		7434	
17	Workshop	2	Community training workshops	16	Refer to matrix of cost/ person in Operation Manual		3,000	
18	Workshop	2	Training workshop on palm management	1	Refer to matrix of cost/ person in Operation Manual		4,327	Number of participants estimated=25-30
19	Workshop	2	Training workshop for promoters	4	Refer to matrix of cost/ person in Operation Manual		1,923	To cover the cost of participation of the promoters in course of

								participatory methods
20	Workshop	2	Community members study tour and visit to palm management experiences in Veracruz or Guatemala	1	Refer to matrix of cost/ person in Operation Manual		3,846	15-20 participants
21	Workshop	2	Community members study tour and field experience exchange on bromeliads and orchids in Oaxaca	1	Refer to matrix of cost/ person in Operation Manual		2404	15- participants
22	Workshop/ meeting	2	Indigenous religious leaders forum	1	Refer to matrix of cost/ person in Operation Manual		1600	30 local participants
23	Internal Consultant	2	Forestry specialist technical coordinator	1	Forestry specialist time sheet Operational cost	TOR developed for Bank evaluation	34,200	Technical coordinator will dedicate 100% to the project, 70% covered by GEF funding 30% by Pronatura. Estimated cost for 18 months
24	Individual Consultant	2	Technical consultants for palm	2	3 CVs comparison of qualifications based on TORs	TOR need Bank approval	48,750	100% technical staff dedicated to the project
25	Internal consultant	2	Indigenous technical responsible for community involvement in management of bromeliads and orchids	1	Technical indigenous staff of Pronatura time sheet Operational cost	TOR developed for internal use	19,026	18 months time share 100%
26	Individual Consultant	2	Technical consultants for orchid propagation and management	1	3 CVs comparison of qualifications based on TORs	TOR need Bank approval	18,000	Total amount for consultants in the orchid garden is estimated in 25,000, partial cost is projected in this 18 m plan.
27	Goods & Non consultancy	2	Material for orchid botanical garden for demonstration and training purposes	1	3 Quotations		19,537	

28	Internal consultant	2	Communication Strategy for rural people	3	Comm. Center Operational cost. staff time sheet		9,519	Specific strategies for bromeliads, orchids and cycads
29	Non-consultancy services	2	Signs and trails in botanical garden	1	3 Quotations		1,923	
30	Community subprojects	2	Subprojects approved based on the call of proposals requirements and selection process	To be defined	Call of proposals for subprojects and agreements with selected beneficiaries	Call of proposals need Bank approval	28,846	35% of the total amount for subprojects are planned to be executed in the first 18 months
31	Individual Consultant	2	Study on conservation incentives for extractive reserves	1	3 CVs comparison of qualifications based on TORs	TOR need Bank approval	4,500	Consultancy will start in the second semester of first year and will conclude in the second year
32	Internal Consultant	2	Advisory for establishment of communal protected areas in Cerro Namiyugua and in Tzontehuitz	2	Land conservation mechanism Pronatura staff Time sheet. Operational cost.	TOR will be prepared for internal use	7,000	
33	Individual Consultant	3	Market study of palm in Mexico	1	3 CVs comparison of qualifications based on TORs	TOR need Bank approval	11,538	
34	Individual Consultant	3	International Consultant for Sustainable Market Promotion in US	1	3 CVs comparison of qualifications based on TORs	TOR need Bank approval	16,850	
35	Individual Consultant	3	International Consultant for Sustainable Market Promotion in Europe	1	3 CVs comparison of qualifications based on TORs	TOR need Bank approval	4500	50% of total amount in this 18 month plan and starting in second year of the project
36	Internal consultant	3	Design and production of video and printed materials for sustainable palm promotion	2	Comm. Center Personnel time sheet Operational cost	TOR will be prepared for internal use	5,289	English and Spanish materials

37	Non-consultancy services	3	Production (printing) and copies of video		3 Quotations		2,885	Number of copies will depend on cost
38	Workshop	3	Event in US for promotion of market	1	Refer to matrix of cost/ person in Operation Manual		6,000	Cost include travel of participants
39	Workshop	3	Workshop in Mexico with Consejo Interreligioso	1	Refer to matrix of cost/ person in Operation Manual		1,923	
36	Internal consultant	3	Design and production of communication materials for mexican religious groups, about the use of ceremonial plants including a section of Web site	several	Comm. Center Personnel time sheet Operational cost	TOR will be prepared for internal use	3,300	Spanish materials
39	Goods	4	Vehicle	1	3 Quotations		19,231	
40	Goods	4	Computer equipment	4	3 Quotations		5,769	4 computers or less based in price
41	Goods	4	Office furniture	vary	3 Quotations		4,808	Desk, chairs and furniture for file keeping
42	Individual Consultant	4	Project assistant	1	3 CVs comparison of qualifications based on TORs		6,923	9 months during first year
43	Individual Consultant	4	Contract advisor	1	3 CVs comparison of qualifications based on TORs	TOR's need Bank approval	4,000	Contract will specify the scope of the activities
44	Individual Consultant	4	Audit	1	Based on the selected audit firm	Selection process presented and approved by the Bank	2,000	

ADDITIONAL OPERATIONAL COST 18 MONTHS ESTIMATED IN:

27,000 COMPONENT 2, (FIELD EXPENSES)

2,500 COMPONENT 3,

55,526 COMPONENT 4. (INCLUDES ADMINISTRATIVE AND OFFICE COST, AS WELL AS ADMINISTRATIVE STAFF 11.9%)

TOTAL : 85,026

Annex 10. Indigenous Peoples Planning Framework (IPPF)

A. Project Objectives and its reference to rural and indigenous peoples.

Project Development Objective

Reduced pressure on endangered forest species used for religious ceremonies and improve livelihoods of local communities and partnerships with religious groups

Global Environmental Objective

Areas under sustainable management and protection status increased, in sites of ecoregions of global importance in Chiapas.

Intermediate Results

1. Legal national framework and knowledge for management improved for the conservation and sustainable use of NTFP of ritual and ceremonial value.
2. Indigenous communities and rural peasants' capacity and organization strengthened for sustainable harvesting of NTFP and conservation of habitats.
3. International and national religious groups, communities and other stakeholders partnerships developed for sustainable consumption of forest species.

The proposed project is based in the understanding that people's behavior and practices towards the environment is motivated by a combination of reasons; subsistence and basic needs, consumption patterns often influenced by media and social standards, economical and commercial profits. Among those reason cultural and religious values for the use of species have been often denied in conservation projects.

This project seeks to develop a linkage between the cultural and religious value of nature (the creation, mother earth) to the promotion of conservation behaviors for sustainable use and production of non-timber species. For that reason the project approach is from the social and cultural dynamics underlying the use of biodiversity. For achieving the project objectives; participation of indigenous, rural peoples and religious groups is mandatory in all stages of the process. Methodologies for project implementation will include participatory planning, participatory knowledge development, and communication strategies based on cultural perceptions and background (language and cosmovision) and participatory evaluation.

The project seek to contribute to the objective 8j of the Convention in Biological Diversity, that states, "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices"

Project components:

1. Knowledge management for the conservation of species used in ceremonies
2. NTFP Cultural Participatory Management Plans
3. Partnership Building with religious groups for conservation and the promotion of fair markets.
4. Project management, monitoring and evaluation

B. Description of Social Assessment Process

Project Location:

The project will work in localities of the Sierra Madre de Chiapas and the Chiapas Highlands (Annex 3 Maps) Additional communities could be added to the project in other regions of the State, as result of project process and communities interest.

The project will work at three levels of intervention:

- 1.- Community groups: Groups of individuals and families directly involved in the use of NTFP
- 2.- Community assembly and authorities: The members of the assembly and the communal authorities need to participate in the decision making process for planning, conservation and establishment of harvesting rates and areas, as well as for agreements on access and benefits sharing.
- 3.- Municipal authorities. In the case of some of the project sites the work will be conducted at the level of the municipality, for example in Suchiapa and in San Juan Chamula, the authorities will be highly involved in the definition and establishment of protected areas within their territory.

The communities pre-selected for project activities during the first 6 months are:

Sierra Madre: Sierra Morena, Tierra y Libertad, Nueva Independencia, Capitán Luis A Vidal, Municipalities of Suchiapa and Villaflores.

Chiapas Highlands: Aguacatenango, and Chamula parajes (to be defined by the authorities) Municipality of San Juan Chamula.

The social assessment was conducted during preparation phase of the project and it included the following activities:

Revision of Literature and Background Information: Articles and reports were obtained from published materials about social and cultural backgrounds of the Maya people in Chiapas highlands and from technical reports of previous projects from the National Commission of Protected Areas, and the National Commission of Forestry. Data from the national population census, about social indicators, population, livelihood indicators were collected and analyzed for the project communities and municipalities. Other economical data were obtained from the municipal reports and economic reports produced by the State Government of Chiapas.

Meetings and Interviews: Project concept was presented to the major stakeholders and discussed before the project planning process started. Those consultations included governmental agencies such as CONAFOR, CONANP, SEPI, CONABIO, SEMARNAT- Wildlife Department, municipalities authorities of Villaflores and San Juan Chamula ; religious organizations such as the Council of Latin-American Churches, the Alliance of Religions for Conservation, Dioceses of San Cristóbal de Las Casas of the Catholic Church, the Evangelic Alliance of the Chiapas Highlands. Authorities from the communities of Tierra y Libertad and Sierra Morena were visited to explain the interest of Pronatura in continue developing the local capacity for sustainable manage of palm. Other stakeholders such as Continental Floral Greens intermediaries in the region as well as the University of Minnesota were consulted at the beginning of the process for consideration of their perspective on the situation of palm market in the USA. International NGOs with interest in specific aspects of the project were involved as partners for contributing with cash or in-kind support, specifically The Nature Conservancy. Information about the intentions of the project was shared with Conservation International, IDESMAC and the Rainforest Alliance.

Field surveys and community visits: Field surveys for gather information and a perspective of the current situation in the selected communities were conducted as part of the social assessment. It includes an analysis of the organizational structure of the communities, aspects related with the access to the forest, benefits sharing, decision making process, relations with external actors, situation of the extraction of species, and perceptions of the potential cultural, social, environmental and economical impact of the overexploitation of the wild species and its habitat. Surveys included meetings, interviews and visits to the forest area with key informants.

Planning workshops: A series of planning workshops were conducted during the preparation phase, for the PDF-A and for the MSP elaboration. For PDF-A, workshops were organized with the representation of a mixture of major stakeholders, governmental agencies, religious groups, commercial intermediaries, communities' authorities, and academic advisors. For the preparation of the MSP, a workshop with the actors involved in producing, marketing and supporting sustainable *Chamaedorea spp.* Palm was held, as well as three micro-regional planning workshops in the communities of the Sierra Madre and the Lacandona region. Consultations with the Chamula collectors and field trips to the current and past collecting sites were organized as a participatory way of sharing an understanding of the condition of the species and the habitats used for the ceremonies. A planning workshop with the municipality of Villaflores about the cycads was also held. A final workshop for drafting the development of the Logical Framework was organized with the stakeholders mentioned above.

C. Description of Selected Communities

The project will be conducted in conjunction with local Chiapas communities, made up of indigenous or rural *mestizo* peoples. During the preparation of the MS Project Document, consultations and workshops were completed with the participating communities in the first year. A description of the background of these communities and their participation in project preparation is provided here.

San Juan Chamula (Bromeliads)

San Juan Chamula is located 17 Kms from San Cristóbal de las Casas in the Chiapas highlands. Chamula is a mayan-tzotzil municipality, where 98.71% of the inhabitants are indigenous and 62.88 % are monolingual. Total population for San Juan in 2000, was 59, 005 inhabitants, of which 72% were under 30 years old, the average age is 16.¹⁰

Population is distributed across a landscape that presents a mosaic of agriculture and oak-forest patches. This spatial arrangement is a result of the land occupation process which responds to a social logic for distribution and access to natural resources. 95.15% of the population lives in small villages distributed in 109 localities. Each household has agricultural land, access to forest patches for firewood consumption, medicinal and edible plants, as well as water springs or small streams.

The main subsistence activity is the production of maize, cabbage and beans. Women produce their clothes out of the wool from sheep, raised as part of their regular duties.

Chamula is the most densely populated municipality in the Chiapas highlands, where most of the indigenous population is found. It has 720 inhabitants per square Km. while the region's average is 128 persons / Km²

In the last 20 years the pressure on land has provoked several arrangements for keeping up livelihood; an increased number of indigenous young men and women work in San Cristobal as day laborers, construction workers, chauffeurs and waiters. In addition, as a result of religious disagreements, thousands of people have been displaced to San Cristóbal de Las Casas, where they have established

¹⁰ INEGI-Gobierno del Estado de Chiapas. Anuario Estadístico de Chiapas, ediciones 2001 y 2002. Aguascalientes, Aguascalientes 2002.

new settlements in the peripheries of the city. 52% of the forest coverage in Chamula has been transformed into agricultural landscape; the remaining has a fragmented distribution.¹¹

In recent years, some of the villages (*parajes*) are facing water scarcity during the dry season. Many springs have dried up and an infrastructure for water distribution is lacking.

Indigenous identity and cohesion is one of the most remarkable characteristics of the people of San Juan. This is a result of the complex social organization that defines the public and religious charges within the community.

The municipal capital (*cabecera municipal*) of San Juan Chamula is divided into three neighborhoods; San Juan, San Pedro and San Sebastian. Each one has a territorial relationship with a defined number of villages (*parajes*), with which people hold patri-lineal family ties. Each group of villages owes loyalty and responsibilities to their own specific neighborhood in town¹².

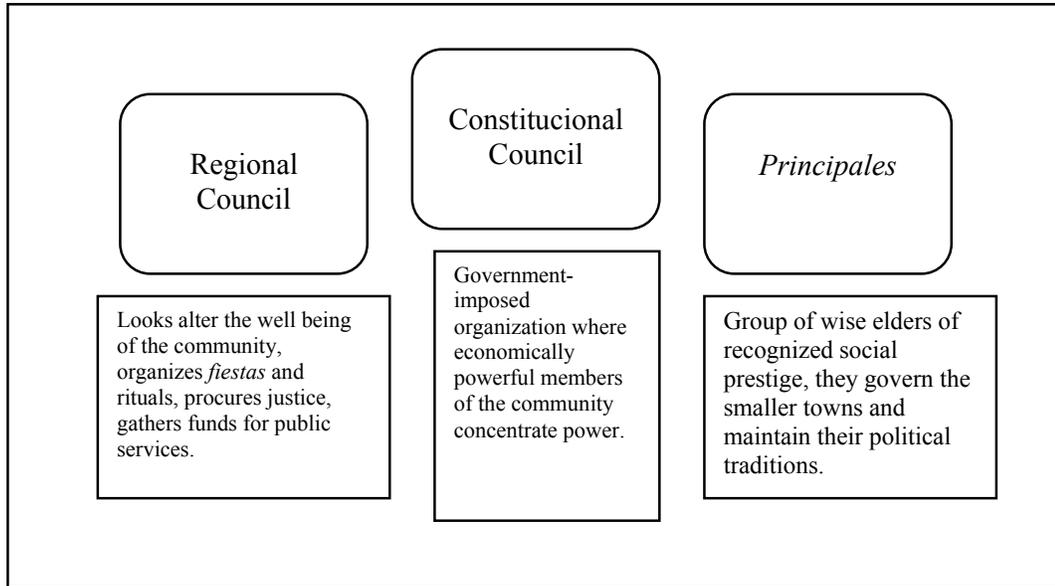
Traditional political and religious organization is made up of several hierarchical positions, or “*cargos*”, renewed on a yearly basis. These positions consist of a series of social roles or functions, situated on a social scale, which every member of the community is obliged to undertake. These positions are renewed yearly, and every individual may assume a new role each year. Participation in positions with higher social rank implies a stronger economic commitment. Personal expenses dedicated to fulfilling the commended task can be very high. In some cases, depending on their duties, community members must rent living quarters in the *cabecera municipal* and commit full time to their undertaking. This system of shared responsibilities is a common characteristic of Mesoamerican indigenous cultures.

In Chamula, there are many positions related to religious activities : *mayordomos*, *alférez*, *martomá cunc nichim*, musicians, etc. Responsibilities are quite varied and go from taking care of the images of saints, church maintenance and organization of *fiestas* to flower collection. In the past, the system for assigning political positions in Chamula was based on this system of participation. In this way, by fulfilling traditional duties along the life would led a person to the possibility of becoming a political representative of Chamula. Today there is much debate among sociologists and anthropologists concerning this system. In Chamula, those families with the most economic power; those who control the sale of alcohol, transportation, and market sales; also has great influence in religious and political life. This results in a system of control also known as *cacicazgo*. Because public participation is related to religious activity, the system relies on this church-related social structure. The influence of other churches and evangelical groups has caused violence and conflicts to arise. Those who decide to change their religion are expelled from the community. This has been pointed out by some sociologist as a violation of basic human rights, and by others as a form of indigenous cultural resistance impeding ethnic change.

Political life in Chamula is directed by three groups: the Regional Council, the Constitutional Council and the Council of Elders made up by men of recognized social importance, known as the *Principales*. They are in charge of maintaining traditions and the perpetuation of knowledge from one generation to the next, as well as the organization and executions of agricultural rituals, care and the conservation of saints and buildings used in the ceremonies. Some of these elders are also judges and public administrators.

¹¹ Population-Environment Análisis Data Base. CEPPIC. Pronatura Chiapas, 2005.

¹² Rivera, et.al. 2005



The *cuc nichim* are responsible for the collection of ritual herbs and plants used in the ceremonies. Each one of the *mayordomos* and *alférez* makes use of bromeliads and other plants for their activities throughout the year. Based on the information obtained during the preparation of this project, a total of 95 positions related to the Chamula *fiestas* were identified. Each of these has 4 *cuch nichimes*, and in the case of the *Paxión* and the *Nichim* 6 for each, Yielding a total of 384 *cuch nichimes* (flowers gatherers).

Participation in the Preparation Phase.

During the preparation phase, both the Constitutional Council and the Traditional Council participated. They also attend a workshop for designing the project logical framework. The project will support initiatives which attend to the municipalities’ concerns, such as reforestation, conservation of ceremonial sites, as well as dissemination of environmental information and communication, aimed at raising ecological awareness. The integration of a group of *cuc-nichim* as liaisons for the Project was agreed upon, as well as periodical meetings with local authorities. Because the project involves important aspects of ceremonial activities, representatives of the Constitutional Council agreed to inform the *Principales* about the project. Their approval is important as several aspects of general interest to community members are involved. We agreed that, if the GEF decides to finance the project, community leadership will be respected, with Pronatura providing training and technical support.

The division for productive projects of the Secretariat for Indigenous Peoples, SEPI helped elaborate the logical framework for the project. They agreed to support the activities through their medicinal plant nursery project, already implemented in several communities of the Chiapas highlands. The Fact that a new governor will be elected in the state this year must be taken into account, as the participation of the new officials of SEPI will have to be coordinated.

By the other hand Pronatura manages two conservation areas on the limits of San Cristobal de Las Casas with San Juan Chamula; Huitepec and Moxviquil reserves. In both cases, Pronatura has developed activities with the neighboring villages of San Juan for sharing conservation responsibilities. In Huitepec Pronatura helps Ichinton Village access water from a stream in the reserve in correspondence, the community helps Pronatura to keep and guard the forest. In Moxviquil, Pronatura has been working with the neighboring villages in the construction of fuel saving stoves and the creation of a revolving fund. Chamula agreed to protect the remnants of the forest bordering Moxviquil to create a “buffer” zone.

For the Chamula people, the understanding of the relation between forest coverage and water is clear. That is the reason why villagers from Pozuelos asked Pronatura to help save the old growth Oak and Cloud forest remnants still found on the slopes of the sacred Tzontehuitz volcano.

Considering its watershed features, the forest in Tzontehuitz is an important area for water harnessing. Maintenance of superficial and underground water is recognized by geologists and foresters as a key function of cloud forests. Tzontehuitz is also a sacred place because it houses a traditional ceremonial site, in which Chamula people offer prayers for preserving water, health and food.

AGUACATENANGO COMMUNITY

The social evaluation report produced during the preparation phase includes a description of the visits and natural resources situation currently occurring in this community. However, a process of greater involvement with the local assembly and *ejido* authorities must begin in the first quarter of project implementation in order to define the plan of activities with the community. In Aguacatenango the project will work in the management and conservation of orchid species, if the *ejido* agrees to participate.

Communities and *Ejid*os in the Sierra Madre of Chiapas (Palm)

Regional Context

Under natural conditions, the camedor palm is found in middle altitude humid tropical forest and cloud mountain forests of Chiapas, since its growth is closely tied to specific environmental conditions (humidity and temperature). For several decades, traditional extraction methods have been used in these types of forests (from the mid 19602 up until the 1980’s). Extraction is found to be more prevalent in the cloud forests of the Sierra Madre’s two ranges, as well as some parts of the tropical rainforest in the biospheres of La Sepultura and El Triunfo.

According to studies, there are 26 species of camedor palm, of these, six are used in Chiapas for nutritional and commercial purposes (*Chamaedorea quezalteca*, *Ch elegans*, *Ch ernestiagusti*, *Ch oblongada*, *Ch graminifolia* and *Ch tepejilote*). The first shows a greater distribution in the Sierra Madre, while *the Ch. ernesti-agusti* thrives better in the Lacandona rainforest. In both cases, these species represent an important source of income for the local population.

Below is a table showing the communities in Chiapas where camedor pals have traditionally been extracted for commercial purposes.

VILLAGE NAME	MUNICIPALITY	REGION (Natural Reserve and geographical area)
Las Golondrinas	Acacoyagua	El Triunfo – Coast
La Laguna	Acacoyagua	El Triunfo – Coast
Pantaleón Domínguez	Mapastepec	El Triunfo – Coast
El Triunfo – Costa Las Palmas	Mapastepec	El Triunfo – Coast

Nicolás Bravo	Mapastepec	El Triunfo – Coast
Santa Rita Las Flores	Mapastepec	El Triunfo – Coast
Unión Los Olivos	Mapastepec	El Triunfo – Coast
Rosario Zacatonal	Mapastepec	El Triunfo – Coast
El Vergel	Mapastepec	El Triunfo – Coast
Bienes Comunes San Antonio	Pijijiapan	El Triunfo – Coast
Capitán Luis A. Vidal	Silpepec	El Triunfo – Central Depression
Laguna del Cofre	ontecristi de Guerrero	El Triunfo – Central Depression
Toluca	ontecristi de Guerrero	El Triunfo – Central Depression
Nueva Colombia	Ángel Albino Corzo	El Triunfo – Central Depression
Plan de Ayala	Villa Corzo	El Triunfo – Central Depression
Sierra Morena	Villa Corzo	La Sepultura – Central Depression
Tierra y Libertad	Villa Flores	La Sepultura – Central Depression
Los Ángeles	Villa Flores	La Sepultura – Central Depression
Viva Chiapas	Villa Flores	La Sepultura – Central Depression
Nueva Independencia	Villa Flores	La Sepultura – Central Depression
Josefa Ortiz	Villa Flores	La Sepultura – Central Depression
Villa Hermosa	Villa Flores	La Sepultura – Central Depression
Raymundo Flores	Tonalá	La Sepultura – Coast
Las Palmas	Tonalá	La Sepultura – Coast
Piedra Ancha	Arriaga	La Sepultura – Coast
Tiltepec	Jiquipilas	La Sepultura – Coast
Rodolfo Figueroa	Cintapala	El Ocote
Gustavo Díaz Ordaz	Cintapala	El Ocote

During the first year, this project will work with communities in the Sierra Madre. The degree of development surrounding this activity varies from one community to the next. For this reason, the selected communities have been chosen for the onset of the project in order to allow significant results, which in turn will extend our capacity with experience gained for future inclusion of more communities.

Features of palm-collecting communities

1. Type A. Communities where collection is undertaken by families, with no internal accords and usually no legal authorization
2. Type B. Communities where some development of nurseries and planning processes have taken place, but which remain disorganized, with no internal management and great waste due to erroneous practices. Legal permits are often cancelled or still pending.
3. Type C. Communities with a definite conscience regarding natural resource management and alternative development, with a certain level of organization and expertise, but requiring support in order to improve leaf selection and market relations.

4. Type D. Communities with a high level of development, seeking to gain certification and improve sale prices.

These categories are different from those presented in the sub-projects section as they are specific to palm production; they coincide, however, with the 4 levels mentioned there. Based on these categories, a group of communities has been selected to begin the project, also, micro regional workshops have taken place, including a total of 21 communities

Communities Selected to Begin the Project (Yr1)

LA SEPULTURA BIOSPHERE RESERVE

Sierra Morena (Type C)

With 1750 hectares for 37 *ejido* members (1985 census), of which 850 hectares are under forestry management and densely covered in subpernifolius tropical forest, this region stands out because 85% of its territory yields well preserved rainforest vegetation.

54 families live there, and their principal sources of income are coffee and camedor palm sales. The second yields a consistent economic profit, while coffee sales occur once a year. Corn and cattle are not common activities in this *ejido*.

Due to internal agreements this *ejido* is subdivided into parcels, this implies a de facto recognition of individual land ownership, especially for coffee production. However, forestry management is recognized as a collective activity thanks to internal legislation regulating the community's productive activities.

Sierra Morena is a strongly cohesive community thanks to family ties and longtime trust relationships. The *ejido* council has granted land to the youth sons of community senior members, involving them in productive and administrative activities. In this way the assembly integrates the worldview of two distinct generations, making this a particularly interesting community.

Sierra Morena has a permit allowing the extraction of camedor palm resources dating from allowing a total of 22.5 tons. The price for each packet of 700 leaves is 14 dollars. Estimated annual income from the camedor palm is 22,500 dollars.

Internal organization is based on respect for the rules and constant revision of internal processes integrated into a formal organization with legal recognition. They have gone as far as delegating specialized functions in a rather complex and organized scheme.

This is by far the most advanced *ejido* in terms of appropriation of the forestry management process and palm commercialization. They have adopted the goal of establishing 200 hectares of palm enrichment plantation in order to achieve their target of 500 packets weekly. Currently they sell xxx packets per week.

This is the site that allows the idea that palm management is well on its way towards sustainability.

Tierra y Libertad:

The *ejido* of Tierra y Libertad was established in 1972 and expanded in 1986, and now totals 3,309 hectares. Its working area extends into 300 or 400 hectares of federal lands.

According to the latest census carried out by the local authority, there are 123 *ejido* members and 39 others living there. All of them are farmers with some cattle ranching activity, subsistence agriculture

and coffee plantations. Forestry activities are now being suspended, but are part of the region's history and were once an important source of income.

Tierra y Libertad is located on the edge of the most important core-zones of the reserve and is currently in a state of great marginalization. In spite of the health and education service infrastructure found in the town of the same name; a clinic with a doctor and a nurse and a school offering kindergarden through 12th grade education; illiteracy rates are very high, especially among women.¹³ Hygiene conditions are precarious at best, especially in terms of water cleanliness since the river is used for bathing people and horses, washing clothes, cooking and as a sewage dump.

The population of 678 people¹⁴ is quite young, as 48% are under 15 years old and only 5% are over 55¹. Marginalization presents a real problem for these young people, and very few will see an opportunity to study beyond the 12th grade. This is the greatest stumbling block for the development of this *ejido*.

Most residents continue to grow the traditional *milpa* of beans, maize and other related crops (Morgantini, 2004). However, the viability of corn production is waning as the price of fertilizer rises and pressure from US markets lowers the price of corn.

The importance of tomato as a cash crop is on the rise in Tierra y Libertad, making productive use of greenhouses. However, because of the difficulties involved in growing this crop, only those with economic resources and capabilities are able to undertake it.

Cattle's ranching, on the other hand, is becoming more and more attractive due to the relatively high income per work hour and the security involved in owning a living capital. Cattle have been promoted by *ejido* authorities with the support of government institutions.

Family income is also augmented by salaried work, as day laborers in the case of the men, or small economic activities mainly undertaken by women (food stores or pork and chicken farms). These activities, however, are not able to sustain a reasonable quality of life, resulting in the migration of over 10% of the population to the United States.

The *ejido* was established by families with some knowledge of forestry management. Proofs of this are the remnants of the "encanto" lumberyard, a vestige of the pine forest extraction from days prior to the establishment of Tierra y Libertad. Later, a permit was granted allowing up to 1500 m³ of lumber to be extracted yearly in 1985. Finally, in 1999 a permit allowing legal extraction is granted. This permit was requested by 27 members of the community without permission of the local assembly, and this generated problems and internal conflict. Timber extraction was not being carried out appropriately, and this caused trouble with the CONANP, bringing about a revision and final suspension of the permit in 2001. Since then the people have been working on internal organization and decision-making processes on issues pertaining to natural resources and distribution of benefits.

Towards the end of reestablishing the use of forest resources in the community, a council has been formed made up of the *ejido's* principal leadership, who support the local authority in decision-making and project promotion.

The most notable results of this effort are the enrichment of camedor palm populations through the creation of a nursery as well as plantations. Also of note is the process of conflict resolution and negotiations which should lead to the reestablishment of lumber activities after the 2001 suspension.

¹³ MORGANTINI, R. (2004). Diagnostico agrario del ejido Tierra y Libertad. Tesis no publicada disponible en la Universidad de Chapingo sede San Cristobal de las Casas o en Pronatura-Chiapas A.C.

¹⁴ ALFONSO RUIZ A. (2002). Diagnostico de salud de la comunidad Tierra y Libertad, municipio de Villaflores, Chiapas. Document no publié disponible à la Juridicción sanitaria n°IV, Secretaria Estatl de Salud, Villaflores, Chiapas.

The community was also benefited this year by payments for environmental services thanks to their conservation practices, another incentive towards organization in favor of sustainable practices and conservation. The community's goal is to develop economic alternatives through local transformation of forest resources in order to reduce migration and provide better living options to future generations.

Nueva Independencia:

Established 1991 by children of the neighboring *ejido* of Tres Picos, Nueva Independencia has 247 hectares, equally distributed among 24 *ejidatarios* and a total population of 114 inhabitants. 64% are under 20, and 32% under 50.

Their process of legitimization before agrarian authorities is quite recent, for this and other reasons it remains a much marginalized community, offering education only up to 6th grade. In order to access secondary education, health services, telephones or transportation, the people must walk to down the mountain to Tres Picos. These conditions led to the migration of all the founding members to the United States, and temporary migration of all others.

Ground coverage is almost 100% forest, as grain crops have been reduced to household consumption or totally abandoned. This is mainly due to ecological conditions (chill and humid with broken topography and steep inclines) unfavorable for high yields (no possibility of planning improved seed), and the restrictions imposed on cutting the tropical forest due to the closeness to the reserve nucleus. Growing organic coffee is the main economic activity for the men who are expanding into new parcels of land, while the women offer an important contribution by growing vegetables and fruit trees as well as raising chickens.

The small population, as well as the adverse living conditions, promotes social cohesion, with little internal conflict and a favorable disposition towards organization. On the other hand, the population's age reflects in a strong individual dynamic, and the focus towards perennial crops includes a projection towards the future and a positive long term vision.

The extraction of the camedor palm was the main source of income for this community during its first years and up until the mid 90's, when the creation of the biosphere reserve prohibited further extraction. This situation was accepted by the community since it coincided with the coffee plantation's maturing into productive age, from where the producers generate an alternative income. viable alternative to the past illegally smuggling palm leaves. However, the community of Nueva Independencia has retained their culture of palm use, and for this reason the plantation program for enriching natural populations put forth in 2000 was received with great enthusiasm and motivation. All members of the *ejido* participate in this program, developing independent nurseries among their coffee plantations in order to grow vegetation that will enrich the natural palm population. The imminent recognition before official authorities of their *ejido* status will allow harvesting this natural resource legally.

This project represents a special challenge for this community and its demographics due to the lack of usable land to be distributed among coming generations. It implies the need to create viable economic activities involving perennial crops in order to avoid internal conflict and massive exodus towards the United States.

EL TRIUNFO BIOSPHERE RESERVE

Capitán Luis A. Vidal:

This *ejido* includes a surface of over 11,100 hectares in total, made up of an agricultural zone and an extension of some 1,200 hectares on the edge of part of the reserve's nucleus. The population is distributed among 10 main settlements (Capitán, Reforma Las Pilas, Salinas, Concepción Pinada,

Matazano, Bejucal, La Lucha, Agua Tibia, Santa María and Rancho Bonito) as well as several small ranches.

The *ejido*'s administrative capital is located in Capitán Luis A. Vidal and access to the rest of the towns often proves difficult due to the topographical conditions, with most populations some two hours' walk from Capitan (La Lucha is a mere 5 hours away on foot). Communication with the rest of the world is also difficult, as Capitan is 2 hours' drive, over precarious dirt roads, from the municipal capital of Siltepec. For this reason, there is a stronger relationship with the municipality of Jaltenango, 2 hours' drive over paved highway.

The *ejido* is home to 580 families, with 304 official members, with a total population estimated around 3000 people. Marginalization is extreme, especially in places far from Capitán main settlement. The lack of services is apparent in terms of health (only two clinics for the entire region, one in Capitán and the other in the barrio of Santa María) and education (all barrios offer schooling up to the sixth grade, but only two localities have secondary education). It is worth mentioning that a new preparatory school was recently built in Capitán.

This situation brings about massive migration in seek of salaried jobs. According to several residents, many young people seek to cross the border to the United States. All of the teenagers of the barrio Reforma Las Pilas, for example, have entered illegally into the United States. This brings about a lack of labor during the coffee harvest, often the main or sole source of income, and growers must resort to hired Guatemalan workers. Few people ranch cattle and agriculture is almost entirely for family subsistence.

In terms of land use rights, agricultural lands are all divided into parcels. Federal forest land in the high regions where the camedor palm is found, however, are communally administered; meaning only settlements in the highland regions have access to them (Bejucal, Sta Maria, Agua Tibia, Rancho Bonito, Reforma Las Pilas, La Lucha). Each one of these barrios has its own area of influence, and land is considered a communal good belonging to the local population, except for a few hectares dedicated to vegetable farms.

Forest land is extremely important, especially the cloud montane forest growth representing the most prevalent vegetation of the *ejido*, around 7,500 hectares. Here is where the camedor palm grows naturally in important concentrations. The *ejido* holds a permit for its extraction as of 2004, but only the barrios with influence within the extension have the right to execute it. Four of these (Bejucal, Agua Tibia, Rancho Bonito and Reforma Las Pilas) began harvesting and commercializing in 2005, but were unfortunately interrupted by hurricane STAN. The two deliveries of palm they were able to make to the commercial intermediary, brought economic benefit, but today they face problems regarding to the fulfillment of administrative procedures to the SEMARNAT, and this has not allowed them to continue its harvesting activity as planned. This limitation show the type of investment in human development needed for improve sustainability and management. Among the most urgent needs of the palm workers are the promotions of an internal organization able to overcome the physical limitations in communication to the exterior, and the importance of enriching existing palm population through the development of nurseries in order to bring the harvesting areas closer to their homes, especially during rainy coffee harvesting seasons.

D. DESCRIPTION OF PARTICIPATIVE PROCESS WITH COMMUNITIES INVOLVED IN DESIGNING THE PROJECT.

Pronatura has maintained a relationship with communities in the Chiapas sierra since 2003, and especially with the communities of Tierra y Libertad, Sierra Morena and Capitán Luis A. Vidal. During hurricane Stan, Pronatura helped bring aid in the form of foodstuffs and building materials to the area. In January, 2006 Pronatura organized workshops with several producers, buyers, research scientists and other participants in the camedor palm production process, including government and

church representatives. The goal was to gain a general diagnostic of the current situation regarding this resource. Community representatives participated in this workshop.

To gain a community perspective, micro-regional workshops were organized in conjunction with *ejido* leadership and CESMACH coordination.

Three micro-regional workshops were organized (Sepultura-Ocote, Triunfo, and Lacandona Rainforest and Cañadas), on February 2 and 3 we undertook the first workshop to with 6 communities in attendance from the biosphere reserves of La Sepultura and El Ocote, technicians from both sites and from the *Dirección de Fomento Agropecuario* from the municipality of Villaflores. A total of 26 people attended.

A second workshop was organized on February 9 and 10 with 5 communities from the biosphere of El Triunfo reserve. Technicians from this reserve and promoters from the organization of *Campesinos Ecológicos de La Sierra Madre de Chiapas* (CESMACH). A total of 17 people assisted.

The third workshop took place in the community of Lacanjá Selva Lacandona on February 16 and 17. 6 *ejidos* from the region of Las Cañadas and 4 of the 5 sub communities that make up the Lacandona community assisted. There was further participation by technicians of the Montes Azules biosphere reserve, technicians from SEMARNAT, CONAFOR, ECOSUR, and special guests from SPR *La Flor de Catemaco*, and the sierra of Santa Martha Veracruz, as well as professors and research scientists from the University of Chapingo.

In each case, our objective was to use community perspective to understand the current situation of the camedor palm population, and to evaluate the most common difficulties for sustainable use of this forest resource, searching for viable solutions.

Workshops were conducted through thematic guidelines related to the different aspects of the management and commercialization of camedor palm. The sessions combined presentations, group dynamics, teamwork and discussion exercises. The community representatives developed their own diagnostics of the main issues and difficulties proved particularly interesting. Based on these, working alternative models were designed, aimed at attending the most urgent problems.

Due to the wide range of diversity from one region to the next, and the different levels of development in the organization process of each community, the results of each workshop provide the scope of activities to undertake in each case and for the project design. In the region of La Sepultura where there is a higher level of organization for example, results focus on supporting the implementation of forestry management for the camedor palm. In El Triunfo, on the other hand, inventories of remaining population must be undertaken and nurseries need to be established. The Lacandona tropical areas require support in the negotiation process between different populations and regulatory institutions.

The information gathered from each workshop is being processed and memories are in project files. The table below highlights some of the most outstanding features found.

Organization		
Problem	Solution	Who
- Lack of common vision - Lack of community accords - Lack of regulation for access to resources	Talks with leaders Reaching community agreements Training promoters Development of an organization for palm issues	<i>Ejido</i> authorities, promoters, support groups
Divisionism	Seek unity through raising awareness among members	Pronatura Conanp Municipal President
Concentration of all activities	Delegating responsibility,	The assembly and support

by the <i>ejido</i> authority or the palm cutters' representative	defining tasks and functions, elaborating working plans	groups (Pronatura)
Lack of technical and management skills	Solicit training from support institutions Create a training plan	<i>Ejido</i> and group authorities, support groups (NGO's)
Regulation		
Lack of knowledge: - on regulation - on institutions	Seek aid from support groups	<i>Ejido</i> and group authorities
Lack of compliance: - to internal regulation - to permit conditions - to buyer's contract	Raise member awareness Track compliance to commitments Create a watchdog committee	Local Council <i>Ejido</i> Police
Lack of technical studies and management plans	Agreements with supporting institutions for obtaining subsidies	<i>Ejido</i> and group authorities
Lack of legal permits	Application based on technical studies	<i>Ejido</i> and group authorities
Commercialization		
Disorganized supply Insufficient volume	Organize volume supply Establish nurseries and plantations	Support institutions and dependencies
High transportation costs	Create warehouses and gathering routes Agreements between communities	Support institutions and groups
Cost of technical services	Seek support of government institutions Train community technicians	<i>Ejido</i> and group authorities Support institutions and groups
Forestry Management	Implement regulation of volumes in annual extraction sites	General assemblies, authorities, Community technicians, support technicians
	Raise consciousness and knowledge on palm species dynamics	Institutions, Community technicians, support technicians
	Design methodological evaluation and monitoring of extraction activities	Institutions, Community technicians, support technicians

E. PROCESS FOR SOCIAL EVALUATION AND COMMUNITY INTEGRATION DURING PROJECT EXECUTION.

The project will begin activities with 4 communities of the Sierra Madre in Chiapas and in San Juan Chamula. In the first 6 months a social evaluation of Aguacatenango will be undertaken, as well as communities involved in cycads collection in Suchiapa and Villaflores. Other highland communities could become integrated before 18 months.

A socio-economic diagnosis must take place in each community, and an evaluation of their present social organization. Meetings and workshops with local assemblies must take place in order to gain support from *ejido* members.

Socio-economic diagnosis must include the following information:

- Size and structure of the population
- Brief history of the community
- Size of territory and land use
- Population or *ejido* members with land use rights
- Main economic activities in the region
- Average per capita income
- Women's involvement in production, and reproductive rights
- Average level of education
- Percent of family income gathered through ceremonial forest plant extraction
- Current state of non-lumber forest plant extraction for ceremonial use in the community.
- Organization structure
- Conflicts and opportunities for local development
- Community proposal for working model

In addition, project archives must contain reports, aid-memories, and lists of attendance to meetings for planning and debate with local assemblies; as well as reports living testimony to the fact that the communities are informed and in favor of the project, and that they are committed to participate.

F. Sub Projects Selection process

Sub-projects (subcomponent 2.6) are planned to support communities in the implementation of projects to increase their capacity and performance in the management, production and commercialization of non-timber products.

The following is a list of criteria that will be use for the identification and selection of project in the communities:

1.- The “project” could be presented by a social organization, by the *ejido* or by a group of people within the *ejido*. In each case the project will be presented with the letter of support or signature of the *ejido* authority, or of the members of the organization involved.

2.- Projects should be presented in written including the following:

- Location
- Purpose and rationale,
- Description of the group or community
- Description of the planned activities
- Expected results
- Budget
- Timeline

3.- In all cases the sub-projects will have a clear relation with the improvement of the management of the non-timber species or their habitats, or with measures or activities that will increase, diversify or sustain the economical or social benefits of the use of selected non-timber products.

4.- The community projects will be equally offered to women and young people as well as men. People with no legal rights on the land (avecindados) will also have opportunity of presenting proposals.

5.- The type of projects that could be financed (it is not an exhaustive list):

- a) Installations for management and production of orchids and bromeliads
- b) Botanical gardens for educational and tourism uses, including signs, trails and labor for installation of exhibit
- c) Tree nurseries for production of tree seedlings for reforestation purposes or for production of palm, cycads and other species of ceremonial use.
- d) Improvements of buildings and other structures for establishment of a gathering center, for quality control or palm
- e) Management plans
- f) Registration process of a UMA (Wildlife Management Unit)
- g) Communication activities, such as organizing events, trips or production of materials, festivals

6.- The amount of each project will not exceed 20,000 US.

7.- Project identification. The projects could be identified and promoted by any of the stakeholders involved, and could be selected in any time during the MS implementation. Materials informing about this possibility will be distributed in the communities where enough level of organization and participation is achieved. It is expected that community project selection and implementation will be likely to happen during the second and third years. The projects will be selected with the participation of the following parties:

Member of the Board of Directors of Pronatura
Pronatura Executive Director
Technical Coordinator of the MS
CONANP member (when de request is from a community within the Protected Area)
Wildlife Dept of Semarnat

8.- Administrative arrangements. A written agreement between Pronatura and the beneficiaries will specify the administrative arrangements.

Annex 11. Alliance of Religions and Conservation.

Alliance of religions and conservation (ARC) is a secular body that helps the major religions of the world to develop their own environmental programmes, based on their own core teachings, beliefs and practices, ARC help the religions link with key environmental organizations – creating powerful alliances between faith communities and conservation groups, was founded in 1995 by HRH Prince Philip. They now work with 11 major faiths through the key traditions within each faith. In 1986, Prince Philip, then President of WWF, asked five leaders of the five major world religions – Buddhism, Christianity, Hinduism, Islam and Judaism – to come and discuss how their faiths could help save the natural world.

It was a unique occasion, involving some of the world’s leading environmental and conservation bodies sitting down for the first time with the world’s major faiths to discuss how they could all work together. From this meeting arose key statements by the five faiths outlining their own distinctive traditions and approach to the care for nature. And from these came the seeds of ARC.

After the Assisi meeting, WWF, assisted by its religious advisors led by Martin Palmer, began to develop a programme of working with each major faith on a wide variety of conservation projects. By 1995, the original five faiths had been joined by four others, the Baha’is, Daoists, Jains and Sikhs and the work had grown so considerably that Prince Philip decided to create a new independent organization to coordinate it. That year he – together with representative of the nine world religions - founded the Alliance of Religions and Conservation (ARC) in the grand setting of Windsor Castle, England. For the first time an organization existed to link the secular worlds of conservation and ecology with the faith worlds of the major religions.

In 1997 ARC arranged a meeting at Lambeth Palace between leaders of the nine religions and the President of the World Bank Mr James Wolfensohn, as well as some key World Bank staff. The aim was to discuss ways in which alternative economic models arising from the faiths could help reduce poverty and environmental destruction. From this historic meeting, held at the Archbishop of Canterbury’s London Palace, came many links between the faiths and the World Bank, of which the [ARC/World Bank](#) projects and the new ARC/World Bank book “Faith in Conservation” are part.

In November 2000 ARC and WWF, joined by conservation bodies, partners such as the World Bank and an array of foundations, celebrated the first 26 in Nepal, in the ancient city of Bhaktapur. The event put ARC and its work firmly on the international scene and ARC’s work tripled within one year of the Nepal meeting. The meetings also led to an exciting scheme, by which religions would become more actively involved in socially responsible investing of their stocks and shares. The resulting <http://www.arcworld.org/projects.asp?projectID=48> is now well on its way to becoming a new separate organization.

In June 2003 His Excellency the Prime Minister of Mongolia Mr Nambaryn Enkhbayar agreed to accept the post of [International President](#) for an initial three years.

Annex 12. Stakeholders Map

STAKEHOLDER	TYPE	INTEREST/ROLE
San Juan Chamula Municipality	Local Government	Reforestation, protect watersheds, preserve culture
Villaflores Municipality	Local Government	Active involvement in management of resources in the Municipality, establishment of a protected area
Communities in La Sepultura and in el Triunfo	Communities	Increase benefits from commercialization of palm, income alternatives
Cuc Nichim in Chamula	Key individuals	Reduce the time and cost for collecting bromeliads for their ceremonies, preserve traditions and forest
Traditional collectors of cycads in Suchiapa	Key individuals, local government	Preserve festivities without damaging nature
State Secretary of Indigenous Peoples	State Government	Support projects that benefit indigenous peoples
Wildlife Department of Semarnat	Federal Government	Strength regulations and norms to improve the management and use of wildlife
CONABIO	Federal Government	Promote the value of biodiversity and increase the knowledge
CONAFOR	Federal Government	Diversify the sustainable use of forestry products including non-timber.
PROFEPA	Federal Government	To have clear technical arguments for revision of extractive permits and practices in the field.
CONANP	Federal Government	To strength conservation practices in the communities living in protected areas, and to increase conservation outcomes.
Researchers from UNICACH, ECOSUR and UACH	Academic	Increase the scientific knowledge about the status of the wild species and its habitats,
Alliance of Religions for Conservation	International NGO	Share contacts and experiences in working with faiths, and learn from the project in Mexico in order to achieve their mission.
CLAI	Religious group	To explore means for introduce Christian church in environmental concerns
Lutheran World Relief	Religious group	To support the communities with fair trade and connecting

		people for human well being.
Dioceses of San Cristobal	Religious group	To find alternatives for the poor
University of Minnesota	Academic	To promote the concept of sustainable palm in the market and support communities
Continental Floral Greens	Commercial	To maintain profits on ornamental leaves, to explore sustainable markets
Commercial intermediaries	Commercial	To keep business and improve quality of palms for commercial purposes

Table of Contents

Annex 2. Results Framework Matrix	3
PDO	3
Annex 3. Maps	6
Annex 4. Project Structure	8
Annex 5. Brief Description of Pronatura Chiapas, A.C.	10
Annex 6. Environmental Assessment.....	12
Annex 8. Procurement Arrangements	27
Annex 9. Procurement Plan (first 18 months).....	32
Annex 10. Indigenous Peoples Planning Framework (IPPF).....	37
Project Development Objective	37
Annex 11. Alliance of Religions and Conservation.....	52
Annex 12. Stakeholders Map	53