

GEFSEC Project Tracking System

Response Due Date: 05/11/99

Correspondence Description

Addressed to: <i>Mr. Kenneth King</i>	Correspondence Date: 04/20/99
Date Received: 04/21/99	Organization: WB
From: Lars Vidaeus	

Assigned To: M. Ramos

Status: Open

Type: Document
Topic: MSProj: Mexico: El Triunfo Biosphere Reserve: Habitat Enhancement in Productive Landscapes

Action Instructions

- For Bilateral meeting
- For information only. No action needed.
- Please handle/respond on behalf of Mr. Kenneth King and provide a copy.
- Please handle/respond on behalf of Mr. Mohamed El-Ashry and provide a copy.
- Please prepare a draft response and return to Program Coordinator
- Please reply directly and provide a copy.
- Please review and/or technical comments

Special Instructions

Mario, please enter your review in the PRS database.
GEF staff, please provide your technical comments to Mario by May 7.

Information Copies Sent To:

K. Kumari, H. Acquay, M. Cruz, J. Taylor

Projects File Room Location:

Note: A copy/original of the document is being sent directly to your attention.

Please return this page with a copy of the incoming correspondence and the reply/action taken to Program File Manager (GEFSEC Project File Room) before or by due date with the original copy of the correspondence and the reply/action.

OFFICE MEMORANDUM

RECEIVED

DATE: April 20, 1999

99 APR 21 AM 9: 24

TO: Mr. Kenneth King, Assistant CEO, GEF
Attention: Program Coordination

GEF SECRETARIAT

FROM: *Kimes for*
Lars Vidaeus, GEF Executive Coordinator

EXTENSION: 3-4188

SUBJECT: **Mexico – GEF Medium-Sized Project (MSP)**
El Triunfo Biosphere Reserve: Habitat Enhancement in Productive Landscapes

1. Please find attached the Project Brief for the “Mexico - El Triunfo Biosphere Reserve: Habitat Enhancement in Productive Landscapes Project” submitted to the World Bank by IDSMAC. The project has been endorsed by the GEF national operational focal point (see letter, also attached).
2. In accordance with operational guidance for approval of Medium-Sized Projects, we are submitting this project brief to the GEF Secretariat for action by the Chief Executive Officer (CEO). We are simultaneously circulating copies to UNDP/GEF, UNEP/GEF, STAP, and the CBD Secretariat for comments within 15 working days, or by May 11, 1999.
3. We look forward to receiving the GEF Secretariat’s comments on this Medium Size Project by May 25, 1999 (if not before). Thank you and best regards.

Distribution:

K. King, GEF Secretariat (Fax: 23240)

R. Asenjo, UNDP (Fax:212-906-6998)

A. Djoghlaif, UNEP (Nairobi) (Fax: 9-011-254-2-520-825)

R. Khanna, UNEP (Washington) (Fax: 202-331-4225)

M. Gadgil, STAP (Fax: 9-011-91-80-334-1683 or 91-80-331-5428)

M. Griffith, STAP Secretariat (Nairobi) (fax 254-2-623-140)

H. Zedan, CBD Secretariat (Fax: 9-1-514-288-6588)

cc: Brizzi, Hernandez (LCC1C); Redwood, Lovejoy, Kimes, Ruthenberg, Abedin (LCSES); Castro, Bossard (ENVGC).

ENVGC ISC
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GEF Medium-Sized Grant

**El Triunfo Biosphere Reserve: Habitat
Enhancement in Productive Landscapes**
Chiapas, Mexico

April 20, 1999

List of Acronyms

CAS	Country Assistance Strategy
CERTIMEX	Mexican Certifier
CESMACH	Campeños Ecológicos de la Sierra Madre de Chiapas
CI	Conservation International
CNA	Comisión Nacional de Agua
ECOSUR	El Colegio de la Frontera Sur
FAI/Redd Barna	Fundación de Apoyo Infantil Chiapas (linked to Redd Barna Foundation of Norway)
FAI/FAI Mexicana	Fundación de Apoyo Infantil Chiapas (part of national foundation of Mexico)
FONDEM	Fondo de Emergencia
GEF	Global Environment Facility
GoM	Government of Mexico
GTZ	German Technical Assistance Agency (<i>Deutsche Gesellschaft für Technische Zusammenarbeit</i>)
ICEAAC	Indígenas y Campesinos Ecológicos de Angel Albino Corzo
IDESMAC	Instituto para el Desarrollo Sustentable en Mesoamérica
IFC	International Finance Corporation
IHN	Instituto de Historia Natural
IICA	Instituto Interamericano de Cooperación para la Agricultura
INE	Instituto Nacional de Ecología
INI	Instituto Nacional Indigenista
INIFAP	Instituto Nacional de Investigación Forestales, Agrícolas y Pecuarias
ISMAM	Indígenas de la Sierra Madre de Motozintla
MSP	Mid-sized Project
NGO	Non-Governmental Organization
SAGAR	Secretaría de Agricultura, Ganadería y Desarrollo Rural
SEDESOL	Secretaría de Desarrollo Social
SEMARNAP	Secretaría del Medio Ambiente, Recursos Naturales y Pesca
SERNYP	Secretaría de Ecología, Recursos Naturales y Pesca, Estado de Chiapas
TAC	Technical Advisory Council
TNC	The Nature Conservancy
UACH	Universidad Autónoma de Chapingo
UCOAC	Unión de Campesinos Orgánicos de Angel Albino Corzo
UEPA	Unión de los Ejidos Progresistas de Acacoyagua
UEVM	Unión de Ejidos Villa Mapastepec
UNDP	United Nations Development Program
USAID	United States Agency for International Development

MEDIUM-SIZED PROJECT BRIEF

I. PROJECT SUMMARY

PROJECT IDENTIFIERS	
1.- Project name: El Triunfo Biosphere Reserve: Habitat Enhancement in Productive Landscapes	2.- GEF Implementing Agency: The World Bank
3.- Country or countries in which the project is being implemented: United States of Mexico	4.- Country eligibility: Mexico ratified the Convention on Biological Diversity on March 11 th , 1993
5.- GEF focal area: Biodiversity	6.- Operational Program/Short-term measure: This proposal falls within two Operational Programs: Forest and Mountains (Operational Programs 3 and 4).
7.- Project linkage to national priorities, action plans, and programs: The proposed Medium-Sized Project (MSP) is consistent with the goals in federal and state environmental programs: Mexico's ' <i>National Development Plan</i> ' and ' <i>National Environment Program 1995-2000</i> ' both emphasize the importance of conserving natural protected areas. The Mexican Government issued the ' <i>Mexican Natural Protected Areas Program 1995-2000</i> ', an effort to develop a strategy for protecting Mexico's rich natural resources in consultation with the national community of scientists, conservationists, and indigenous peoples. The ' <i>National System of Natural Protected Areas</i> ' that has been implemented seeks the protection of the most representative natural ecosystems in the country. One of these areas of great importance is the El Triunfo Biosphere Reserve, covering one of the last large remnants of cloud forests in the country. The project also complies with the goals of the ' <i>Chiapas Program of Ecology, Natural Resources and Fisheries 1995-2000</i> ', which assigns the highest priority to the protection of the bioregion in which El Triunfo is located.	
8.- GEF national operational focal point and date of country endorsement: Secretariat of Finance and Public Credit (SHCP), Ricardo Ochoa Rodríguez, Endorsed: 27 April, 1998.	
PROJECT OBJECTIVES AND ACTIVITIES	
9.- Project rationale and objectives: Mexico ranks fourth in the world among megadiversity countries. Faunal and ecosystem diversity are threatened by deforestation, overexploitation, uncontrolled tourism, economic development, and unsustainable grazing policies. In response to these threats, the Government of Mexico developed a strategy to protect critical habitats, which includes strengthening the management of priority reserves and promoting local participation in the conservation of these reserves. The El Triunfo Biosphere Reserve is considered such a priority conservation area. El Triunfo Biosphere Reserve has remarkable biodiversity conservation value, with relatively large tracts of still-intact cloud forest and a high diversity of native animal and plant species, including many which only occur in the Sierra Madre of Chiapas and Guatemala. The Reserve is internationally known as the major stronghold of the highly threatened Horned Guan (<i>Oreophasis derbianus</i>) and Azure-rumped Tanager (<i>Tangara cabanisi</i>); it also harbors substantial populations of the Resplendent Quetzal (<i>Pharomachrus mocinno</i>) and many North American migratory bird species of conservation interest. Many of those species survive in traditional shaded coffee plantations which ecologically resemble the original forest. The coffee sector provides an excellent opportunity for integrating conservation in the productive system. The structural profile of certain 'shade coffee farms' resembles that of a complex forest and provides important habitat for globally significant biodiversity. About 70% of the coffee production in the El Triunfo Biosphere Reserve is traditional and considered organic and, to a large extent, biodiversity friendly; it should thus be eligible for organic certification. However, only 2% of coffee production in El Triunfo presently receives the official seal for being certified as organic, the rest being sold as regular coffee. Significant potential exists for certifying coffee which would be both organic and 'biodiversity friendly' (with diversified shade cover), enhancing the financial attractiveness to local farmers of maintaining coffee cultivation techniques that are compatible with conservation	

goals. Seizing this opportunity would result in the maintenance and/or enhancement of the area under shade cultivation, and by extension, the conservation of habitats suitable for biodiversity that may otherwise be lost.

The urgency for conservation action in the productive landscapes of the Biosphere Reserve comes from recent notable losses in forest cover and wildlife abundance. Remote sensing has demonstrated that the Reserve lost 17,000 ha of forest in the past 20 years, and local farmers report a 50% reduction in wildlife populations within shade coffee farms during the past 10 years. The cutting of forests for the establishment of new coffee plantations was classified as the second most important threat to the Reserve's biodiversity in its Management Plan. Some big coffee plantations technified their production system, reducing diversity and quantity of shade, and introducing the use of agrochemicals. A trend has begun among small holders to replicate this system.

The proposed Medium-Sized Project would support local efforts to adopt sustainable agricultural practices, with respect to shade-grown coffee, and biodiversity-friendly activities that reduce fragmentation of forest habitats, promote the conservation of biodiversity, and increase local participation in the benefits of conservation.

<p><u>Project goal and objectives</u></p> <p>The goal of the proposed project is: Conserve Biodiversity in the El Triunfo Biosphere Reserve buffer and influence zones.</p> <p>The specific project objective is: Biodiversity is conserved and habitat increased in productive landscapes of the El Triunfo Biosphere Reserve buffer and influence zones by (i) preserving coffee cultivated under diverse shade trees, (ii) reconverting other coffee production regimes, and (iii) promoting other sustainable production opportunities.</p>	<p>Indicators</p> <p>Stabilization of areas under natural forest in the buffer zone: 50 % (approximately 4,000 ha).</p> <ul style="list-style-type: none"> • More than 100% increase of the area under diverse shade coffee production (from 700 ha to 1500 ha). • Decision making carried out and responsibility taken in conservation activities by 20% of men, women and youngsters.
<p>10.- Project outcomes:</p> <ol style="list-style-type: none"> 1. Local communities, their production organizations with their technical staff are actively involved in planning, implementation and monitoring of biodiversity conservation. 2. Agricultural production (primarily coffee) is sustainable in terms of impact on biodiversity and economic viability. 3. Native species population of flora and fauna are conserved and a recuperation of threatened species can be observed. 	<p>Indicators</p> <ol style="list-style-type: none"> 1. Documentation of results of regular village meetings, advances in activities and the status of contributions and benefits, results of participatory evaluation. 2. Average net income of small producers increased by about 25% through diversified and biodiversity friendly production systems based on coffee compared to baseline. 3. Presence of selected endemic species related to biodiversity friendly cultivation is at least stabilized and preferably increased compared to baseline. The species selected are: (i) Penelope purpuransces, (ii) Penelopina nigra, (iii) Pharomachrus mocinno, (iv) Bassariscus sumichrasti, (v) Bothrops nummifier, (vi) Panthera onca, (vii) Persea americana, and (viii) Ficus spp.

<p>11. Project activities to achieve outcome</p> <p><i>1 Community participation</i> (Total component US\$ 436,600; GEF contribution US\$ 251,000)</p> <p>1.1 Introduce technical staff in participatory techniques and tools through training.</p> <p>1.2 Hold community workshops for participatory planning, implementation and monitoring.</p> <p>1.3 Support self-evaluation processes of farmers and communities.</p> <p>1.4 Promote local organizations and leadership.</p> <p>1.5 Define strategy for technical assistance services based on success of activity.</p> <p><i>2. Sustainable Production Systems.</i> (Total component US\$ 991,400; GEF contribution US\$ 313,000)</p> <p>2.1 Create and validate small producers models for diversified production.</p> <p>2.2 Review potentials for ecologically sound products and support their sustainable use.</p> <p>2.3 Develop and promote effective certification for biodiversity friendly coffee.</p> <p>2.4 Promote horizontal and vertical communication and learning: between farmers, producer organizations, technicians and their institutions on local and regional level.</p> <p>2.5 Promote community-based and action-oriented small scale research on bio-diversity-friendly methods for coffee production.</p> <p>2.6 Strengthening of marketing for bio-diversity-friendly products through corresponding organizations.</p> <p><i>3. Native Species Conservation</i> (Total component US\$ 693,100; GEF contribution US\$ 161,000)</p> <p>3.1 Develop a vision between institutions and local organizations for the project's objective and its follow-up (distribution of responsibilities for indicators).</p> <p>3.2 Monitor flora and fauna with communities.</p> <p>3.3 Support participatory environmental education and awareness programs.</p> <p>3.4 Pilot the creation of agreements and rules with communities on land use for bio-diversity hotspots.</p> <p>3.5 Develop a platform for environmental information exchange.</p>	<p>Sources of Verification</p> <p><i>1. Community participation</i></p> <ul style="list-style-type: none"> • Documented results of community workshops. Participation list of community workshops showing percentage involvement of men, women and youngsters. • Seven organizations and their members are strengthened and demonstrate leadership, including sustainability indicators of organizations. • Documented result of Technical Assistance Services Workshops and evaluation of implementation. <p><i>2. Sustainable Production Systems.</i></p> <ul style="list-style-type: none"> • List of diversified products and its evaluation • At least 1500 ha coffee plantations certified as 'biodiversity-friendly'; list of certifiers, criteria and procedures, and prices for certification. • At least 50 experimental small producers and documented results. • At least five identified non-extractive projects and their results. • Documented marketing strategy <p><i>3. Native Species Conservation</i></p> <ul style="list-style-type: none"> • Documented result of inter-institutional workshop and annual reports. • 20 community maps for flora and fauna. • Six types of packages of environmental education material available, one each addressing children, women, men, coffee producers, schools and organizations which aim at increased understanding of impact of bio-diversity conservation on quality of life. • Five pilot communities with agreements on land-use for biodiversity hotspots and 15 communities with draft agreements. • Accessibility by communities, local organizations, technicians to environmental data for planning and evaluation purposes (100% of target group: 1500 farmers in 20 communities).
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12. Estimated budget (in US\$) for incremental costs**Project Preparation:**

PDF A (GEF):	25,000	
PDF Co-financing	34,900	INE, IDESMAC, IHN, Consejo Consultivo, IICA/GTZ

Medium-Sized Project:

GEF:	725,000	
Co-financing (all in-kind):	439,400	Rainforest Alliance
	60,000	Pronatura Chiapas
	198,900	Instituto de Historia Natural - Chiapas (IHN)
	88,000	IDESMAC
	439,500	INIFAP
	112,700	El Colegio de la Frontera Sur (ECOSUR)
	18,000	Universidad Autónoma Chapingo (UACH)
	27,000	IICA/GTZ
	12,600	Instituto Nacional de Ecología (INE)
Total:	2,121,100	
GEF Total:	750,000	

Note: These amounts do not include the baseline financing for the project amounting to US\$ 2,606,300. This additional parallel funding comes from INE, IHN, GEF/Mexican Nature Conservation Fund, FONDEM, TNC, CI, IDESMAC, FAI, UACH, COESCAFE, CESMACH, ICEAAC, UNACH, UEVM, ECOSUR and Instituto de Ecología Xalapa/University of Edinburgh.

INFORMATION ON INSTITUTION SUBMITTING PROJECT BRIEF

13. Information on project proposer:

Institute for Sustainable Development in Mesoamerica (Instituto para el Desarrollo Sustentable en Mesoamérica; IDESMAC) is a non-profit private organization, established November 17, 1995, devoted to sustainable development and natural resources conservation. IDESMAC employs 13 researchers/technicians specialized in several disciplines. (President: Antonio Saldivar Moreno, Operational Coordination: Luz María Rodríguez Sáenz).

14. Information on proposed executing agency: Same as above.

15. Date of initial submission of project concept: January 21, 1998

INFORMATION TO BE COMPLETED BY IMPLEMENTING AGENCY:

16. Project identification number: MX-GM-60558

17. Implementation agency contact person:

Ina-Marlene Ruthenberg, Task Manager, Tel.: 202-473 9025, e-mail: iruthenberg@worldbank.org

Christine Kimes, Global Environment Coordinator, Tel.: 202-473 3689, e-mail: ckimes@worldbank.org

18. Project linkage to implementing agency program(s):

The overarching development objective of the Country Assistance Strategy (CAS) for Mexico (1996; Document Number R96-207) is broad-based improvement of human welfare and reduction of Mexico's elevated level of poverty. The CAS-Progress Report (March 1998) and the Draft CAS for 1999 (Board discussion scheduled for June 1999) reinforce this commitment and specifically mention under the environment strategy 'better management of natural resources'. Specifically for GEF programs, it aims to identify 'win-win' investment opportunities through an integrated and mainstreamed approach to development priorities such as biodiversity conservation within sustainable forestry management programs. The proposed GEF MSP would contribute to the CAS-goal and its agenda by: (a) promoting an environmentally, socially and economically sustainable agriculture production system focused on coffee; (b) maintaining and increasing forest zones of exceptional biodiversity and habitat value; (c) improving local participation in the benefits of biodiversity conservation; and (d) strengthening local producer organizations. The proposed MSP would be part of the Southern States Initiative (SSI), one of the World Bank's Rural Focus Programs that aims at supporting sustainable rural development. In the case of Mexico, the region with the highest incidence of rural poverty is composed of the southern states, including Chiapas. Also, the project area (El Triunfo Biosphere Reserve) is an integral part of the Mesoamerican Biological Corridor.

The proposed MSP would directly complement three other WB/GEF projects:

The first is the on-going *GEF 'Mexico Protected Areas Program (FANP)'*. The WB/GEF has been supporting the conservation of 10 protected areas since 1992. The project was restructured in 1996 with the following objectives: (a) protection of unique biodiversity in eligible protected areas; (b) strengthening conservation and management programs for the core areas of each eligible reserve; (c) promoting local participation, including indigenous communities, in the implementation of protected area operating and management plans; and (d) ensuring long-term recurrent cost financing for core protection and conservation activities through the establishment of an endowment fund (FANP). El Triunfo Biosphere Reserve is one of the protected areas covered by the on-going GEF project. The proposed MSP would complement FANP efforts by promoting biodiversity conservation in non-core areas (buffer zone) within El Triunfo Biosphere Reserve through promotion of biodiversity friendly agricultural production techniques (mainly shade coffee) and other biodiversity-compatible activities. There is no duplication in project activities between the FANP project and the proposed MSP. Also, the FANP support is focused on the conservation of the nucleus areas of the Reserve while the MSP would only work in the buffer and influence zones.

The second is the '*Mexico Mesoamerican Biological Corridor (MMBC)*', presently under preparation, which has as its objective the promotion of conservation and sustainable use of globally significant biodiversity through establishment of biological connectors linking Protected Areas in the southeast of Mexico. The MMBC would initially focus on the states on the Yucatan Peninsula. The El Triunfo Reserve is not part of this project but would contribute to the concept. The proposed MSP would generate lessons that could be integrated into future implementation of MBC project.

The third is the *Institutional Development Fund (IDF)* Project with IDESMAC. IDESMAC is currently implementing an IDF grant for Planning and Capacity Building for Sustainable Development in the Selva Lacandona and Highland Areas of Chiapas. This \$189,850 grant carries out a diagnosis of community organizations in order to identify training needs so that the organizations can participate more effectively in development initiatives. The grant supports the promotion of the training program and seminars to plan the training program and finance 35 courses for members of community organizations and a farmer-to-farmer exchange program. The grant agreement was signed in June 1998.

II. PROJECT DESCRIPTION

A. PROJECT RATIONALE AND OBJECTIVES

Project Background

Mexico is ranked fourth among the world's 'megadiversity' countries. Unfortunately, biodiversity in Mexico is threatened by deforestation, over-exploitation, uncontrolled tourism, accelerated economic development, and unsustainable settlement policies. In response to these threats, the GoM developed a strategy to protect critical habitats, which includes strengthening management of priority reserves and promoting local participation in reserve conservation. Within conservation efforts, El Triunfo Biosphere Reserve is considered a priority reserve.

Mexico's '*National Development Plan*' and '*National Environment Program 1995-2000*' both emphasize the importance of conserving national protected areas. The Mexican Government issued the '*Mexican Natural Protected Areas Program 1995-2000*', an effort to develop a strategy for protecting Mexico's rich natural resources in consultation with the national community of scientists, conservationists, and indigenous peoples. The 'National System of Natural Protected Areas' that has been implemented seeks the protection of the most representative natural ecosystems in the country. One of these areas of great importance is the El Triunfo Biosphere Reserve, located in the Sierra Madre de Chiapas because it covers one of the last large remnants of cloud forest in Mexico (see Map). The Reserve is characterized by a significant richness in species and endemism, and plays an important role in the absorption of water, which helps maintain the economies of the most important regions of the state of Chiapas. The project also complies with the goals of the '*Chiapas Program of Ecology, Natural Resources and Fisheries 1995-2000*', which assigns the highest priority to the protection of the bioregion in which El Triunfo is located.

El Triunfo Biosphere Reserve has remarkable biodiversity conservation value, with relatively large tracts of still-intact cloud forests and high diversity of native animal and plant species, including many which only occur in the Sierra Madre de Chiapas and Guatemala. The Reserve is internationally known as the major stronghold of the highly threatened Horned Guan (*Oreophasis derbianus*) and Azure-rumped Tanager (*Tangara cabanisi*); it also harbors substantial populations of the beautiful Resplendent Quetzal (*Pharomachrus mocinno*) and many North American migratory bird species of conservation interest. Many of those species survive in traditional shaded coffee plantations which ecologically resemble the original forest.

El Triunfo Biosphere Reserve covers 120,000 ha, comprising a buffer zone of about 93,500 ha (79%), and a core zone of about 25,700 ha (21%). The core zone is pristine forest and is on land owned by the federal government. The buffer zone is private land, owned by communities, *ejidos*,¹ and individual farms of differing sizes, with a total population of about 14,000 people. About 60% of the buffer zone (56,000 ha) is densely forested, with the remaining 40% of these lands (about 37,400 ha) under agricultural production (mainly coffee, cattle and maize).

The proposed project '*El Triunfo Biosphere Reserve: Habitat Enhancement in Productive Landscapes*' is an inter-institutional effort (government and non-government organizations) that would complement other existing and planned activities that aim to conserve globally-important biodiversity and promote sustainable development in the Reserve itself as well as on a regional level.

¹ An *ejido* is a type of land tenure with collective decision making process; in some cases, ejidos represent communities.

Project working hypothesis

During project preparation the project has developed four working hypotheses:

1. *Potential exists to conserve biodiversity within productive landscapes.* A study conducted in El Triunfo between 1995 and 1996² indicated that the diversity of birds and number of endemic or conservation-interest bird species is larger in shade coffee plantations with diverse shade than in coffee managed under technified shade. Studies in other parts of Mexico and in other countries have demonstrated the value of coffee plantations with ample shade cover for the conservation of other types of flora and fauna.³ With studies involving diagnosis, planning and evaluation of activities for biodiversity conservation conducted at the government level, however, local communities members have rarely been involved.
2. *The status of biodiversity and its habitats within coffee plantations can be improved by informed and sensitized farmers who are capable of implementing biodiversity-friendly activities.* The Reserve's management with its technical staff and other organizations working in the Reserve have been working together with communities, small producers and their organizations to sensitize them about the biodiversity value of their environment. The environmental education program that has been introduced has created great interest and triggered a broader discussion. Environmental workshops have been carried out mainly in the context of projects to introduce 'alternative crops' (e.g. palm) and have encouraged farmers to adopt practices which are more biodiversity- friendly. The success of the organic coffee cooperative ISMAM in Tapachula is a further indicator for the above hypothesis. ISMAM is educating its members and is organizing sensitivity training for them with a strong orientation toward nature conservation, directly impacting biodiversity conservation.
3. *Environmentally-aware community leaders and organized local groups can help promote the increase of forest cover in productive landscapes.* Another threat to biodiversity is the excessive thinning or pruning (shade-reduction) of the trees in coffee plantations and the reduction in diversity to very few-often only one- species. Shade reduction makes a coffee plantation attractive to fewer species of flora and fauna. Against expectations, the coffee plantations managed under the organic production system tend to have less shade than coffee managed under rustic or traditional polyculture systems. A conservation and environmental focus in terms of biodiversity in shade trees is lacking in the application of the 'organic' production system.
4. *The improvement of productivity in the cultivation and commercialization of coffee by small-volume producers depends in large part on the organizational capacity of rural farmers' organizations.* The organizations with greatest success in the utilization of soil conservation practices and marketing of organic coffee have based their work on the sensitizing of their members and the adoption of a community attitude. There are groups in the project area who are willing to follow the example of successful organizations in the region.

Project goal and specific objective

Based on the above rationale, the goal of the proposed project would be to preserve the biodiversity in the El Triunfo Biosphere Reserve buffer and influence zones. The specific project objective would be: to conserve biodiversity and increase habitat in the productive landscape of the El Triunfo Biosphere Reserve buffer and influence zones by (i) preserving coffee cultivated under diverse shade trees, (ii) reconverting other coffee production regimes, and (iii) promoting other sustainable production opportunities.

² Tejada, C., *et al.* 1998. Bird Conservation at El Triunfo, Mexico. Report to the Instituto de Historia Natural and the Instituto Nacional de Ecología, Tuxtla Gutiérrez, Chiapas.

³ Moguel, P. & V. Toledo. 1999. Biodiversity conservation in traditional coffee systems of Mexico. *Conservation Biology* 13 (1).

The project was originated jointly by three local institutions: *Instituto para el Desarrollo Sustentable en Mesoamérica* ('IDESMAC', an NGO established in Chiapas), *Instituto Nacional de Ecología* ('INE', responsible for the administration of the Biosphere Reserve and part of Mexico's Ministry of Environment, Natural Resources and Fisheries [SEMARNAP]), and the *Instituto de Historia Natural* ('IHN', a decentralized institution of the Chiapas state government).

B. CONTEXT OF THE PROJECT

Coffee is the second largest agricultural export in Mexico. By volume, Mexico is the fourth largest coffee producer in the world. It occupies fifth place for area of land in coffee production and leads the world in organic coffee exports. Chiapas is the principal coffee producing state in Mexico and the second most important state for organic coffee, cultivated mainly in indigenous areas. In the communities located in the buffer zone inside the El Triunfo Biosphere Reserve, agricultural extension services provided by state institutions do not cover the needs of small producers. Additionally, most grassroots farmers' organizations lack the economic resources to afford a technical support team for their members. They appear to have limited access to subsidies from government programs and access to loans e.g. from the Rural Credit Bank (interest rates of 9 to 10% per year) is even more uncommon. This leaves small producers with the most common option of credit through commercial traders.

Coffee is the dominant crop in the Reserve's buffer and influence zones and most coffee plantations belong to small producers. These producers use a production system that includes natural shade trees (frequently taller than 30 m) in high densities. The coffee sector provides an excellent opportunity to integrate conservation into productive landscapes. The structural profile of certain shaded coffee plots is similar to that of complex forests and provides an important habitat for globally significant biodiversity. Around 70% of coffee production in the Reserve is produced in a rustic fashion under diverse shade, without agrochemicals, and therefore could be eligible for certification as organic and, as a result of this project, as biodiversity-friendly.' However, only 2% of coffee production in El Triunfo currently receives organic certification and the accompanying price premium.

Certified organic coffee is an alternative of great relevance to small producers in Chiapas. During international declines in coffee prices, especially at the beginning of the 1990's, obtaining a premium price in the European market ameliorated the impact suffered by peasants. Nevertheless, the transformation process of coffee plantations to certified organic is slow in relation to the producers' needs and requires a large investment, especially in labor costs.

The formation of grassroots producers' organizations has permitted Chiapas peasants to produce and export organic coffee, receive technical assistance, and qualify for credit. However, few organizations have achieved an important impact because having technical assistance and economic resources is not enough. Successful organizations are characterized by their focus on cooperation, ethics, responsibility, perseverance and awareness of the value of nature. In this sense, because of its trajectory, the Indígenas de la Sierra Madre de Motozintla (ISMAM) is one of the most recognized organizations in the State. Some of its members live inside the buffer zone of the Reserve.

The coffee production systems in the buffer zone of the Reserve can be classified as follows:

- (a) *Rustic System.* Shade is provided by natural (original) forest trees. Original shrubs and herbs are replaced by coffee plants. This system is characterized by low capital investment, relatively low labor requirements, and few management practices, and allows the producer to obtain firewood and construction materials, food, and medicinal and ornamental plants.
- (b) *Traditional Polyculture System.* It is similar to the rustic system but includes fruit trees and other trees or plants cultivated for household needs.
- (c) *Technified System.* Coffee plants and shade trees are arranged in a homogeneous manner, with a simplified and often monotypic (*Inga* for example) shade strata. Shade density tends to be reduced.

High-yield varieties of coffee are used with this system, frequently requiring large inputs. In the Reserve some technified coffee plantations do not use agro-chemicals.

- (d) *Full Sun System.* In the Reserve this high-input, high-yield system is limited to pilot plots of large producers.
- (e) *Organic System.* To meet organic certification criteria, producers must employ soil conservation measures and avoid agro-chemicals completely, applying only organic fertilizer. These coffee farms may contain a variety of natural and cultivated trees. Normally, they are structurally similar to traditional polyculture farms, but with a significant reduction of shade trees, sometimes to the same degree as in the technified system. The organic system does not necessarily conserve a diversity of shade tree species. In general, meeting organic certification criteria necessitates large labor costs for small producers.

Problems related with traditional coffee production. Problems for small producers are related to productivity, crop storage and commercialization. The harvest is conventionally sold as 'pergamino' (dispulped and dried) beans to local intermediaries for lower than market prices. The organic-certified coffee is marketed for a *premium* price through small producers' organizations which supervise the management of members' farm plots, contact buyers and administer the group's financial resources. However, most of the organizations lack solid internal structures, do not have sufficient training to manage portfolios and obtain financing, and lack the financial power to adequately support producers during the harvest season. As a result, the coffee producers - of both conventional and certified organic coffee - grant a part of their production to local intermediaries in exchange for high interest loans.

In order to compensate for low incomes from coffee production, small-scale producers typically diversify their crops and their activities, working as laborers elsewhere. Crop diversification is widely dependent on the conditions of each community and the policies of the farmers' organizations (e.g. ISMAM diversifies to honey, cacao, ornamental plants). Land use and crop diversification could be topics for community discussion in formal community meetings. There are a variety of plant species that are traditionally harvested from coffee plantations (like oranges, bananas, a specific type of lettuce) for subsistence consumption, but there are some products like the *camedora* palm which are produced for market on a pilot scale.

Provision of Extension Service. Some technical assistance services for agriculture, biodiversity conservation and community development can be found in the project area. These services are provided mainly through government agencies and their programs, such as SAGAR (incl. COESCAPE), SEMARNAP (INE), IHN, and SEDESOL. All these services are, however, highly fragmented and generally inadequate considering demands and needs. SAGAR has about 100 extensionists and COESCAPE, the organization under SAGAR that specializes in coffee, has about 30 technical staff for the whole state of Chiapas. Their capacity to tend to an inaccessible region like the El Triunfo Biosphere Reserve is thus highly limited. INE, the agency responsible for the management of the EL Triunfo Biosphere Reserve, has five biodiversity conservation specialists and IHN five such specialists which are complemented by 13 park rangers. They are a motivated and very committed group that has embraced the concept of biodiversity conservation through community participation, presently reaching out to about 30% of the communities and 600 people. SEDESOL operates limited programs for short term employment in the region. The producer organization, ISMAM, has its own agricultural staff based in the communities which provide technical assistance and use their own coffee plantations as demonstration plots. This has proven to be a successful strategy with stronger organizations like ISMAM whose members live in a small part of the El Triunfo buffer and influence zones. This model, however, requires a level of organization that has proved difficult to acquire for most of the farmers' groups, and thus most coffee production remains sub-optimal, with yields below the national mean. The seven small producer organizations that the project would support have one to two technical staff who carry out agricultural extension activities with very limited means.

Socio-economic situation. Coffee farmers using Rustic and Traditional Polyculture systems usually manage plantations smaller than 5 ha.⁴ These farmers, the main beneficiaries of the project, belong to one of the poorest social sectors in the poorest state in Mexico, Chiapas, and are thus highly marginalized. Communities in the Reserve are dispersed (89% of them have less than 100 inhabitants) and most of the Reserve area population is young; with a high average annual growth rate (more than 4%).⁵ The most common disease in the Reserve is intestinal parasites, and infrastructure for medical services is scarce. Illiteracy in the Reserve area is at 37.5%.⁶

Baseline Situation

Operating plans for the El Triunfo Biosphere Reserve from both governmental and non-governmental funding sources focus heavily on protection of the core nucleus zones of the reserve, biological monitoring of the biosphere reserve, and limited outreach and environmental awareness activities with communities in the buffer zone. Baseline activities may be grouped into the following major categories of activities, and are estimated to cost US\$2,606,300 (funding indicated is for the 3 year period):

(1) Conservation of the five nucleus areas (US\$ 1,630,000). Contributors to activities under this component are INE (US\$ 240,000), IHN (US\$ 210,000), GEF/FMCN (US\$ 330,000), TNC (US\$ 130,000), and IDESMAC (US\$ 120,000). INE and IHN funding is directed mainly to the Reserve's staff for protection activities and surveillance, basic office infrastructure, and logistics. GEF/FMCN funding supports additional technical staff to strengthen the core INE and IHN Team, specifically for conservation of the Reserve's nucleus zones and community outreach activities. TNC is providing resources for capacity building in conservation and management of watersheds and environmental services. IDESMAC finances activities on monitoring of vegetative cover and integrated watershed management. All these activities focus specifically on conservation of the five nucleus areas and building community support for conservation of the reserve.

(2) Prevention and mitigation of natural disasters in the Reserve (US\$ 600,000). Activities in this category are entirely financed by FONDEM (Fondo de Emergencia) and cover the entire Biosphere Reserve. The impact of the forest fires during the summer of 1998 and the torrential storm Javier in September 1998 highlighted the need for more instruments to prevent and mitigate the impact of such natural disasters. Activities to be financed under the baseline scenario include support for firefighting operations, rapid response to post-fire trauma to eco-systems, and post disaster clean-up of rivers and streams. Rich biodiversity systems provide more biological layers that make them less vulnerable to disasters.

(3) Community Participation (US\$ 430,000). The baseline also includes activities in the area of community participation. Contributors to activities under this component are INE (US\$ 60,000), IDESMAC (US\$ 40,000), FAI/REDD Barna (US\$ 270,000), FAI/FAI Mexicana (US\$ 60,000). The activities under this component specifically focus on community education for conservation supported by INE, and social programs with particular attention to children by FAI/Redd Barna and FAI/FAI Mexicana. IDESMAC mainly supports community workshops for biodiversity conservation.

(4) Sustainable production (US\$ 311,300). Contributors to activities under this component are UACH (US\$ 26,300), COESCAPE (US\$ 40,000), CI (US\$ 200,000), CESMACH (US\$ 15,000), ICEAAC (US\$ 15,000), and UEVM (US\$ 15,000). UACH finances capacity building and research activities in the area of agriculture and rural development. COESCAPE supports extension services to coffee producers. CESMACH, ICEAAC, and UEVM which are producer organizations contribute to the Reserve management's activities through supporting extension services in sustainable production for its members living in the Reserve. Within the framework of the IFC/SME program, CI is providing a short-term (6-12 months) line of credit to CESMACH to enable its producers to market organic coffee directly on the

⁴ Trujillo, R. & R. Megchun 1998; Caracterización de los Sistemas Cafetaleros que se ubican en la zona de amortiguamiento de la Reserva de la Biosfera El Triunfo. Informe para el IDESMAC.

⁵ INEGI 1991; Chiapas. Perfil Sociodemográfico. XI Censo General de Población y Vivienda. Instituto Nacional de Estadística, Geografía e Informática (INEGI). Aguascalientes, México.

⁶ INE 1999; Plan de Manejo de la Reserva de la Biosfera del Triunfo, Chiapas.

international market, without having to pass through local middlemen, and thereby increasing the local producer share in the price premium for organic coffee; the credit line must be repaid at concessional rates. CI is also providing from own resources technical assistance and advice to 3 producer organizations (CESMACH, UCOACC, and ICEACC) to build their internal institutional capacity.

(5) Native species conservation (US\$235,000). Contributors to activities under this component are IHN (US\$ 90,000), ECOSUR (US\$ 50,000), UNACH (US\$ 50,000), IDESMAC (US\$ 25,000), and Instituto de Ecología, A.C./Universidad de Edinburgh (US\$ 20,000). IHN supports specifically biodiversity research, monitoring of species and information dissemination. ECOSUR, UNACH and I. De E./U. De. E. contribute with technical assistance by academic staff.

Implementation of these baseline programs would result in effective protection of the nucleus areas of the Biosphere Reserve, and some positive global impacts in the buffer zones, through targetted interventions with specific communities and producers organizations. However, the overall trend in the buffer zone would be towards a marked loss of forest cover and biodiversity habitat, as farmers 'modernize' their practices, decreasing forest cover in coffee plantations and increasing the use of non-biodiversity friendly agro-chemicals. There would be no efforts to develop a sustainable agricultural production system on a broad scale that enhances biodiversity habitats and forest corridors. Community participation under the baseline scenario would consist primarily of awareness enhancement activities.

C. EXPECTED PROJECT OUTCOMES

The project aims to preserve biodiversity in the El Triunfo Biosphere Reserve buffer and influence zones. It would stabilize about 50% of areas in the buffer zone currently under natural forest (approximately 4,000 ha) that are threatened by deforestation over the next 10 years⁷. Another indicator of the project's achievements would be a more than 100% increase of the area under diverse shade coffee production that is biodiversity-friendly from 700 ha to 1500 ha. The participation of the communities in preserving biodiversity and integrating the conservation concept in overall decision making at the community level will be a key factor for success.

The project envisages three principal results:

1. *Local communities, their production organizations and their technical staff are actively involved in planning, implementation and monitoring of bio-diversity conservation.* The impact of this outcome would be monitored through documentation of results of regular village meetings, advances in activities and the status of contributions and benefits, and results of participatory evaluation.
2. *Agricultural production (primarily coffee) is sustainable in terms of impact on biodiversity and economic viability.* The impact of this outcome would be measured by an increase in the average net income of small producers (by approx. 25%) through diversified and biodiversity friendly production systems based on coffee as compared to the baseline.
3. *Native species population of flora and fauna are conserved and a recuperation of threatened species can be observed.* This outcome would be measured by the stabilization and preferably increased presence of selected endemic and threatened species related to biodiversity-friendly cultivation, as compared to the baseline situation. The endemic species selected as biological indicators are: (i) *Penelope purpuransces*, (ii) *Penelopina nigra*, (iii) *Pharomachus mocinno*, (iv) *Bassariscus sumichrasti*, (v) *Bothrops nummifier*, (vi) *Panthera oncaarea*, (vii) *Persea americana*, and (viii) *Ficus spp.*

⁷ The deforestation rate in the Reserve is around 8,500 hectares per year. Thus, 15% of forest cover in the Reserve, or about 17,000 hectares, was lost between 1975 and 1995. The increasing fragmentation of the forest threatens the integrity of the Reserve. See: Arreo la, A., et al. 1997. Evaluación de los cambios de uso del suelo y la cobertura vegetal en la Reserva de la Biosfera El Triunfo, Chiapas, México. Report to IDESMAC, WWF, IHN and INE. San Cristóbal de Las Casas, Chiapas.

D. ACTIVITIES AND FINANCIAL INPUTS

The project would be implemented over a period of at least three years. Given that the proposed approach to sustainable rural development is one of minimalist interventions in terms of financial investments and one of building on participatory processes that will require time, the project would need flexibility in the time frame of project implementation. The three principal areas of activities within the proposed GEF are: (1) community participation, (2) sustainable production, and (3) native species conservation.

1. Community participation (Total component: US\$ 436,600; GEF contribution US\$ 251,000)

The project design is built on effective community participation that promotes the conservation of habitats for biodiversity of global importance. The project activities would reach out to around 1,500 farmers in 20 communities in the El Triunfo Biosphere Reserve influence and buffer zones⁸. Participatory project preparation has developed the basis for this activity and project implementation would broaden and deepen community participation. Technical staff of the participating organizations would be trained in the use of participatory techniques and tools, with participating institutions including farmers' organizations⁹, government¹⁰ and research organizations¹¹. Community workshops would be organized for participatory planning of activities, their implementation and monitoring. These workshops would produce documentation and definition of action plans. It will be crucial that the self-evaluation processes of farmers and communities are enhanced in order to assure adequacy and sustainability of all promoted activities. This would result in the definition of strategy for technical assistance services that is based on success of activity. This knowledge would translate into strengthened local organizations that are empowered for taking leadership.

Under the baseline scenario, community participation would be limited to environmental awareness activities and would only reach a small percentage of communities. Under the GEF scenario, community participation would enable local populations to actively participate in the promotion of biodiversity-friendly activities.

2. Sustainable Production System (Total component US\$ 991,400; GEF contribution US\$ 313,000)

The project would focus on promoting production systems that are in harmony with the exceptional biodiversity value of this location while ensuring an improved well-being for the local population. To achieve this, project activities will contribute to identification and promotion of diversified agricultural production as well as an assessment of potential ecologically sound products and support of their sustainable use; it would include the identification of non-extractive projects, e.g. eco-tourism and bio-prospecting. Reducing risks through diversification, establishing new sources for additional income generation, and enhancing the structural diversity of the landscape to maintain and improve habitats are the expected impacts. Examples of diversification would range from additional products (like fruits, honey, cacao, ornamental plants, eco-tourism etc.) to adding value to these primary products through processing. The communities would be the actors for creating and validating such models for diversified production, while technical staff would play the role of facilitator and resource person.

A central element of this component would be to specifically focus on the main crop in the project region: coffee. Small farmers and their organizations, jointly with the support of technical experts, would define certification criteria for biodiversity-friendly coffee from the Biosphere Reserve¹². This coffee production

⁸ Tres de Mayo, Altamira 1, Altamira 2, Ampliación El Palmar, El Palmar, El Vergel, Guadalupe Victoria, La Victoria, Laguna del Cofre, Las Golondrinas, Las Palmas, Nicolás Bravo, Nueva Colombia, Plan de Ayala, Puerto Rico, Río Negro, Santa Rita, Santa Rita Las Flores, Santa Rosa Las Nubes, and Toluca.

⁹ Treinta de Agosto, Campesinos Ecológicos de la Sierra Madre de Chiapas, Flor de Toronjil de la Sierra, Indígenas de la Sierra Madre de Motozintla 'San Isidro Labrador', Indígenas y Campesinos Ecológicos de Angel Albino Corzo, Unión de Ejidos Progresistas de Acacoyagua, and Unión de Ejidos Villa Mapastepec.

¹⁰ INE, IHN, and INI

¹¹ INIFAP, Universidad Autónoma de Chapingo; ECOSUR, and Instituto de Ecología AC

¹² Preliminary criteria have been developed: Workshop on the definition of criteria for shade coffee, organized in February 1999 by the Smithsonian Migratory Bird Center, in Xalapa, Veracruz, with funding from the Environmental

system requires a diversified shade canopy and prohibits or discourages the use of agro-chemicals. Coffee plantations with Rustic and Traditional Polyculture Systems closely approximate this concept. A workshop for developing the 'local criteria' would be organized by the small producers during the initial months of the project. The small producers and their organizations themselves would promote these 'local standards' and would monitor compliance. Mexican and international experts in the areas of ecology, agriculture, and marketing, including representatives of the WB/GEF MSP in El Salvador '*Coffee and Biodiversity*' and possibly UNDP MSPs which focus on coffee, would participate. Certification of biodiversity-friendly coffee would be implemented through the ECO-OK program of the Rainforest Alliance, which focuses on the use of biodiversity-friendly coffee production techniques. The Rainforest Alliance, in collaboration with a local Chiapas partner, PRONATURA CHIAPAS, would establish a Chiapas-based certification office to provide certification services to small farmers within the El Triunfo Biosphere Reserve. Research on biodiversity-friendly methods for coffee production would be small scale, action-oriented and community-based in order to assure adequacy and acceptance. The project would furthermore strengthen producer organizations in the marketing of biodiversity-friendly products, financing the preparation of a marketing strategy for biodiversity-friendly coffee from El Triunfo to be implemented by the producer organizations.

The project would actively promote horizontal and vertical communication and learning of communities, small producers, producer organizations, and technical specialists and their institutions on the local and regional levels. This strategy has already been initiated through participatory project preparation and would be an on-going process throughout project implementation and evaluation. In an area which is as inaccessible as the El Triunfo Biosphere Reserve, communication and the opportunity to exchange experience gains particular importance.

Under the baseline scenario, habitats in the buffer and surrounding zones will continue to suffer degradation because of changes in agricultural practices that tend to simplify landscape complexity. Under the GEF scenario, biodiversity habitats for globally-noteworthy species outside the nucleus zones of the Reserve will be conserved and improved in the productive landscape.

3. Native Species Conservation (Total Component US\$ 693,100; GEF contribution US\$ 161,000)

To achieve the project goal and the specific objective of native species preservation, it is important to acknowledge the many actors and players involved and their own contribution to this objective through activities that extend beyond the project, particularly as it relates to their daily interactions with biodiversity. The proposed project would contribute to the project goal by working to form a common vision between institutions and local organizations in the project area, supplemented by the work of other projects in the Biosphere Reserve, in particular the GEF 'Protected Areas Project'. For such a joint vision to be implemented, a distribution of responsibilities for which the respective organization can be held accountable is crucial.

Pilot communities would formulate their own local environmental plans to identify the priority environmental issues and necessary actions to be taken as part of this component. By formulating these plans, communities would gain knowledge of the value and preciousness of the biodiversity that surrounds them and would become aware of the degree to which their well being and livelihood are connected to its preservation. Thus empowered, they would become the main actors in monitoring 'their flora and fauna.' It would be crucial to address not only the predominantly male small producers, but to specifically integrate women and youngsters into the participatory environmental education and awareness programs as well. The project would also pilot the establishment of agreements and rules among the communities with respect to land use for bio-diversity hotspots. Finally, the project would develop a platform for environmental information exchange. Disseminating environmental information and feeding it back to the local level is equally as important as the initial generation of this information. It would not only benefit

Cooperation Commission of the North American Free Trade Agreement (see Annex 3). In general terms, this coffee system requires a diversified shade canopy and prohibits or discourages the use of agro-chemicals. Coffee plantations with Rustic and Traditional Polyculture Systems closely approximate this concept.

second-tier planning and monitoring organizations, but it would also effectively help communities to prepare useful environmental plans and to monitor and evaluate their implementation.

Under the baseline scenario, community awareness will be limited to a few areas. Under the GEF scenario, communities will actively participate in conserving and monitoring biodiversity throughout the buffer zone and surrounding areas.

E. SUSTAINABILITY ANALYSIS AND RISK ASSESSMENT

Main factors for success:

(1) *Stakeholder and community participation.* Over the last nine years, the Reserve has actively maintained a supportive relationship with the seven farmers' organizations in the buffer zone (listed in footnote 9), including local communities. Those organizations have expressed the need to strengthen their activities, as their member-producers have an open attitude towards forest conservation, shade trees, and wildlife in their coffee plantations. Representatives from these organizations participated in the formulation and preparation of this proposal (during Block A project preparation) and have been extensively consulted.

(2) *Growth of global markets for speciality and organic coffee.* US sales of roasted gourmet coffee (the US accounts for about half the global market) increased from US\$ 1 billion in 1990 to US\$ 2.5 billion in 1995. 'Bird-friendly coffee' appears to have taken part in this dramatic growth scenario and an increasing number of coffee distributors offering 'bird-friendly coffee' can be found in the US market. Europe has already built a strong demand for organic coffee (and is the main targeted market by ISMAM organic coffee) and its eco-labeling is widespread. Moreover, Japan has demonstrated interest in the biodiversity-friendly coffee market promoted by the Rainforest Alliance.

(3) *Economic viability of small producer investments.* The production system to be promoted under the project would ensure the economic viability of investments and would translate into increased revenues for the small producer. The economic and environmental sustainability of coffee farmers in the Reserve area would be improved through certification of their farms as 'biodiversity-friendly'¹³. The economic analysis of the investments required for Reserve coffee farms to obtain certification has shown that rustic and traditional polyculture production systems are financially viable. Also, technified farms that do not use agro-chemicals may be converted to a biodiversity-friendly production system with minimum financial risk. Only for the technified system that relies heavily on agro-chemicals is a transformation to biodiversity friendly production not economically viable, as the transformation cost would be too high.

(4) *Successful examples of local producer organizations in the area:* ISMAM, located in Tapachula, is an exemplary farmer organization that has been successful growing and marketing organic coffee and by-products of coffee production (e.g. honey) to markets in the USA and Europe. ISMAM is by far the largest farmer organization in the area and has played a key role in the promotion of organic coffee farming in the area. They provide training for coffee farmers and have technical staff that work in the field and deliver extension services.

(5) *Expert support through the Project Advisory Committee ('Consejo Consultivo para el Proyecto').* The project's 'Consejo Consultivo' has been formed by four specialists with ample experience in the management of coffee. Esteban Escamilla, M.Sc. (Universidad Autónoma de Chapingo - UACH) is an expert in production systems. Dr. Juan F. Barrera (Colegio de la Frontera Sur - ECOSUR, Tapachula) is an expert in biological pest control. Dr. Alfredo Zamarripa (Instituto Nacional de Investigación Forestal, Agronómica, y Pecuaria - INIFAP) is an expert in technological and artificial improvement of coffee varieties and is the National Coordinator of Coffee Research. These three researchers are responsible for the highly esteemed degree program in coffee management at the national level. The fourth member of the Council, Presbyter Jorge A. Aguilar Reyna, is the chief advisor for ISMAM and has extensive experience in organizing techniques for grassroots farmers' groups.

¹³ Gobbi, J.A. 1999; Análisis financieros de la inversión asociada a un cafetal amigable con la biodiversidad en la Reserva de la Biosfera El Triunfo, Chiapas, México.

(6) *Specialist support for project start-up (IICA/GTZ).* Initial needs in team building, introduction of efficient and proven methods of participatory diagnosis, planning, monitoring and evaluation of activities, methods and instruments of environmental education, facilitation of coordination of institutions and local organization under the project goal have been identified. The integration of these with concepts developed and applied through IICA-GTZ in the region offers the opportunity of effective support in these areas through papers, correspondence, materials, exchange of experience in the region and punctual personal support.

(7) *Overall sustainability of project activities:* Sustainability of the project activities would be assured through the project's focus on strengthening local community-based institutions and structures. This strengthening strategy would be developed with broad participation and would be a strategy adapted to the situation and capacity and would build on the ownership to this strategy by these organizations and their members. Financial sustainability would be assured through the proven economic viability of shade-grown coffee and the development and implementation of a marketing strategy. Community participation would be made a known and widely accepted approach to decision-making through the development of community biodiversity conservation plans and complemented by environmental education and awareness programs.

Risk Factors and how the project design would address and mitigate them:

- (1) *Lack of established product distribution system of 'bird-friendly coffee', volatile markets and market competition.* The international market for coffee varies unpredictably, causing insecurity among the producers. Furthermore, the concept of 'biodiversity friendly coffee' has generated fear of market competition among producers of certified organic coffee. While the market for organic products is significant, the market for 'biodiversity-friendly' coffee at its initial stages. Ecological awareness of coffee consumers needs to be translated into a willingness to pay a premium for ecologically sustainable coffee. Finally, the dependency on middlemen is one of the factors that at present most restricts the economy of the farmers. The project design would help mitigate these risks through (i) informing producers of the complementarity of the concepts of organic and 'biodiversity friendly' coffee', (ii) supporting small coffee producers' organizations that would reduce the dependency on middlemen, and (iii) developing a market strategy to establish the best mechanisms for the positioning of El Triunfo's certified biodiversity-friendly coffee in the specialty coffee market. Also noteworthy is the fact that in the market for coffee, prices of specialty coffees (for example: organic, bird-friendly, gourmet) fluctuate less than those of conventional coffee.
- (2) *Complying with certification criteria.* Due to lack of information, producers may not adequately comply with certification criteria for organic and "biodiversity- friendly" coffee. This risk would be mitigated through (i) training of technical staff of the producer organization, (ii) broad participation of small producers and their organizations in the development of the certification criteria, and (iii) community-based monitoring.
- (3) *Acceptance and security situation.* The project would need to overcome the history of years of institutional paternalism towards producers that is practiced through government programs. Although the project region is not directly affected, the state of Chiapas is facing serious security problems due to the Zapatista Movement, resulting in a high military presence. Project preparation has been built on broad community participation and thus has generated acceptance. Project implementation and evaluation is designed to continue and to deepen that approach. In addition, the implementing agencies are committed to absolute transparency.
- (4) *Natural Disaster.* The project area faced a serious torrential storm in September 1998 which destroyed lives, livelihoods and physical infrastructure. While these disasters cannot be prevented, their impact can be drastically reduced through reforestation and soil conservation techniques. Such techniques would be promoted in the context of improved agricultural production systems in terms of biodiversity sustainability.

F. STAKEHOLDER INVOLVEMENT AND SOCIAL ASSESSMENT

The *project's stakeholders* include small producers, *campesino* coffee farmers in the area of influence and buffer zone of the Reserve, grassroots farmers organizations, non-governmental organizations dedicated to conservation and sustainable development, research institutions and educational centers, and governmental organizations. The project would reach out to about 1500 small coffee producers in 20 communities in the El Triunfo Biosphere Reserve¹⁴.

Participation in project preparation. Project preparation was based on extensive stakeholder consultation and embraced a pro-active strategy of community participation¹⁵. This ensured that communities in the Reserve were informed about the project and that four pilot communities (Santa Rita Las Flores, 3 de Mayo, Plan de Ayala and Laguna del Cofre) participated actively in the design of the project. The seven producer organizations also had taken an active part in the formulation of the project design and committed themselves to the project. After project approval, a participatory implementation planning workshop would be held to define in greater detail the roles, responsibilities, inter-institutional cooperation, implementation, monitoring and evaluation strategy of project execution.

Social Assessment Methodology and Process: Between August and December 1999, a sample of 75 producers from three communities were surveyed on the issue of coffee production, and more surveys were performed on 'key informants' (producers recognized by the community for their experience in coffee production), their spouses and children from the four pilot communities. The objective was to track their opinion regarding coffee production, the importance of species diversity on parcels for coffee harvesting, women's participation, and the amount of time they had observed the presence of particular species for conservation in their respective areas. Workshops in which the producers suggested alternative coffee production methods were also carried out in these communities, and an historic timeline of the community was produced. Local authorities in 12 communities were interviewed about living conditions in their respective communities¹⁶. Meetings were held with representatives from seven small producer organizations. Information and data obtained from these meetings coincide with those reflected in a study carried out in 1996, in which producers from three communities were surveyed that are members of CESMACH¹⁷

Social Assessment Findings: The findings of the social assessment showed that the improvement of wildlife habitat in coffee plantations would have a positive impact on the human population in the buffer zone. Among the project's impacts identified would be: (i) less effort needed in the collection of firewood, principally benefiting women; (ii) improvement of health conditions and stimulation of an ethno-botanic culture with the use of medicinal plants in the coffee plantations; (iii) easier access to fruits and other food; (iv) lower susceptibility to agricultural pests in diverse ecosystems; and (v) decreased migration to cities with the work opportunities and secure incomes provided through the commercialization of biodiversity-friendly certified coffee. Most of the producers of the area are small producers and '*ejidatarios*'¹⁸ who lack the economic resources to market their products directly. Thus, they are dependent on intermediaries

¹⁴ See footnote 8 for list of participating communities

¹⁵ Activities included consultations and meetings with: (i) numerous communities in the project area; (ii) pilot communities (Santa Rita Las Flores, 3 de Mayo, Plan de Ayala and Laguna del Cofre) for detailed project planning and design; (iii) coffee experts for design of qualified training and establishment of cooperative agreements; (iv) representatives of producer organizations (CESMACH, ICEAAC, 30 de Agosto, ISMAM, UEPA, UEVM and Flor de Toronjil de la Sierra); (v) researchers from the Institute of Natural History and with researchers from the Colegio de la Frontera Sur. A participatory planning workshop was held during the project appraisal mission in Tuxtla Gutierrez ('Taller de Consulta' on January 13, 1999), which included representatives from communities, local grassroots organizations, local producers' organizations; academics, NGOs, government agencies and other interested parties. Follow-up workshops took place in Angel Albino Corzo and Mapastepec with coffee producers and representatives of producer organizations; and with representatives of relevant institutions.

¹⁶ See "Basic Data on El Triunfo Biosphere Reserve Communities" ["*Datos basicos de comunidades de la Reserva de la Biosfera El Triunfo*"], Rossana Megchun, 1999.

¹⁷ Rodriguez S., L. 1997. Impact of the Community Development Program of the El Triunfo Biosphere Reserve on Biodiversity Conservation. [Impacto del programa de desarrollo comunitario de la Reserva de la Biosfera El Triunfo en la conservacion de la biodiversidad.] Report for IHN.

¹⁸ See footnote 1

('coyotes') who acquire most of the coffee at low prices from the producer in exchange for high interest credit to finance harvesting activities. Dependency on these intermediaries has been identified as a central concern for producers. The project would mitigate this dependency by strengthening the marketing capacity of small producer organizations.

Social Capital: The majority of local producers' organizations are in a process of internal consolidation, as they have to adjust to the effects of cyclical variations in coffee prices. This causes a weak internal structure for the members of the organization which, due also to the inevitable reliance on 'coyotes', contributes few real benefits to producers. Most communities and organizations generally do not hold a planning perspective regarding the sustainable use of their natural resources, a characteristic derived from the demographic pressures to make new lands available. Pressures originate from the demand for feeding the population in an anarchist structure of land occupation in which common lands dedicated to agriculture and cattle raising are located according to a generational land distribution framework and not an organized grouping that would allow land uses compatible with the physical characteristics of the land. The proposed project is designed to foster social capital through institutional strengthening of producer organizations and through community participation.

Gender Issues: The division of labor in the communities of El Triunfo is very traditional in the sense that women attend to the daily needs of the household in a service function while men are more involved in agriculture and marketing. Women, however, play an important role during the harvest season in coffee production. The rest of the year, it is the men who predominantly occupy the coffee plantations and market the coffee; economic reward is also given to the men. Although women participate in the decision making within the family production unit, this is not overtly evident. Women play a minor direct role in community meetings and from an outside perspective their participation in communal decision making is negligible. Also, women are not represented in coffee producers' organizations. The project activities would explicitly address issues of gender integration in the participation process and the technical extension service.

Indigenous People: In the El Triunfo Biosphere Reserve just three communities have a predominantly indigenous population. They are not natives of the area but originate from the Highlands of Chiapas and some came as refugees from Guatemala. These communities have a subsistence economy similar to the other communities and part of their income finances the maintenance of their cultural and religious traditions. They claim that governmental organizations in charge of indigenous matters (mainly INI) have not included them in culturally-related projects. One of the beneficiary organizations of the project (ICEAAC) are composed mainly of indigenous peasants from these three communities. The project activities would ensure that they fully respect indigenous peoples' dignity and cultural uniqueness and be sensitive to the situation of the indigenous peoples' ethics and values. (Bank OP 4.20 would be applied). When developing the institutional strengthening strategy for ICEAAC a specialized anthropologist or sociologist would participate in order to ensure that the strategy is adequate and responsive to the indigenous people.

III. INCREMENTAL COST ASSESSMENT

Development Goal, Global Environment Objective and System Boundary

The *development goal* of the project is to conserve biodiversity in the Reserve's buffer and influence zones. This would be achieved through the promotion of sustainable production opportunities, primarily focused on the area's main crop, coffee. The project would aim at preserving coffee cultivated under diverse shade trees and at converting other coffee production regimes. The Biosphere Reserve receives some financial support for conservation activities that directly relate to the conservation of the nucleus zones. The proposed project would complement these ongoing activities with the specific focus on sustainable production systems in the Reserve's buffer and influence zones.

The *global environment objective* is the conservation of habitats for a number of globally threatened species of plants and animals, including various species endemic to a restricted range within Mexico or

within nuclear Central America¹⁹. Natural forest habitats of the region have been disappearing at alarming rates. The most drastic deforestation of the region has taken place on the pacific slopes of the northern Central American region. The El Triunfo Biosphere Reserve now contains the largest intact forest in that bio-geographic region, and provides the most important refuge for numerous globally endangered species, such as the Horned Guan (*Oreophasis derbianus*), the Azure-rumped Tanager (*Tangara cabanisi*), and the Cerro Ovando Salamander (*Dendrotriton xolocalcae*). At least seven species of trees alone are known to science from the Biosphere Reserve or its immediate vicinity.

The *system boundary* would be the El Triunfo Biosphere Reserve, including the five strictly protected nucleus zone (25,700 hectares) and the buffer zone (93,500 hectares). The GEF alternative would be based on activities that ensure sustainability beyond the project's duration as it focuses on strengthening structures and changing behavior based on participation and knowledge. The GEF alternative would not promote the conversion of natural forest to new productive areas, even if these areas were considered biodiversity friendly. The project has contemplated measures to prevent this contingency, through limitations in the certification criteria for biodiversity-friendly coffee plantations.

Baseline

The baseline scenario is estimated to cost US\$ 2,606,300. The baseline takes into account operating plans for the El Triunfo Biosphere Reserve from both governmental and non-governmental funding sources. The baseline focuses heavily on protection of the core nucleus zones of the reserve, biological monitoring of the biosphere reserve, and limited outreach and environmental awareness activities with communities in the buffer zone. Baseline activities may be grouped into the following major categories of activities (funding indicated is for the 3 year period):

(1) Conservation of the five nucleus areas (US\$ 1,630,000). Contributors to activities under this component are INE (US\$ 240,000), IHN (US\$ 210,000), GEF/FMCN (US\$ 330,000), TNC (US\$ 130,000), and IDESMAC (US\$ 120,000). INE and IHN funding is directed mainly to the Reserve's staff for protection activities and surveillance, basic office infrastructure, and logistics. GEF/FMCN funding supports additional technical staff to strengthen the core INE and IHN Team, specifically for conservation of the Reserve's nucleus zones and community outreach activities. TNC is providing resources for capacity building in conservation and management of watersheds and environmental services. IDESMAC finances activities on monitoring of vegetative cover and integrated watershed management. All these activities focus specifically on conservation of the five nucleus areas and building community support for conservation of the reserve.

(2) Prevention and mitigation of natural disasters in the Reserve (US\$ 600,000). Activities in this category are entirely financed by FONDEM (Fondo de Emergencia) and cover the entire Biosphere Reserve. The impact of the forest fires during the summer of 1998 and the torrential storm Javier in September 1998 highlighted the need for more instruments to prevent and mitigate the impact of such natural disasters. Activities to be financed under the baseline scenario include support for firefighting operations, rapid response to post-fire trauma to eco-systems, and post disaster clean-up of rivers and streams. Rich biodiversity systems provide more biological layers that make them less vulnerable to disasters.

(3) Community Participation (US\$ 430,000). The baseline also includes activities in the area of community participation. Contributors to activities under this component are INE (US\$ 60,000), IDESMAC (US\$ 40,000), FAI/REDD Barna (US\$ 270,000), FAI/FAI Mexicana (US\$ 60,000). The activities under this component specifically focus on community education for conservation supported by INE, and social programs with particular attention to children by FAI/Redd Barna and FAI/FAI Mexicana. IDESMAC mainly supports community workshops for biodiversity conservation.

(4) Sustainable production (US\$ 311,300). Contributors to activities under this component are UACH (US\$ 26,300), COESCAPE (US\$ 40,000), CI (US\$ 200,000), CESMACH (US\$ 15,000), ICEAAC (US\$

¹⁹ Generally defined as Chiapas, Guatemala, Belize, Honduras, El Salvador, and northern Nicaragua.

15,000), and UEVM (US\$ 15,000). UACH finances capacity building and research activities in the area of agriculture and rural development. COESCAPE supports extension services to coffee producers. CESMACH, ICEAAC, and UEVM which are producer organizations contribute to the Reserve management's activities through supporting extension services in sustainable production for its members living in the Reserve. Within the framework of the IFC/SME program, CI is providing a short-term (6-12 months) line of credit to CESMACH to enable its producers to market organic coffee directly on the international market, without having to pass through local middlemen, and thereby increasing the local producer share in the price premium for organic coffee; the credit line must be repaid at concessional rates. CI is also providing from own resources technical assistance and advice to 3 producer organizations (CESMACH, UCOACC, and ICEACC) to build their internal institutional capacity.

(5) Native species conservation (US\$235,000). Contributors to activities under this component are IHN (US\$ 90,000), ECOSUR (US\$ 50,000), UNACH (US\$ 50,000), IDESMAC (US\$ 25,000), and Instituto de Ecología, A.C./Universidad de Edinburgh (US\$ 20,000). IHN supports specifically biodiversity research, monitoring of species and information dissemination. ECOSUR, UNACH and I. De E./U. De. E. contribute with technical assistance by academic staff.

Implementation of the baseline scenario would result in effective protection of the nucleus areas of the Biosphere Reserve, and some positive global impacts in the buffer zones, through targeted interventions with specific communities and producers organizations. Despite these positive impacts, the overall trend in the buffer zone would be towards a marked loss of forest cover and biodiversity habitat, as farmers 'modernize' their practices, decreasing forest cover in coffee plantations and increasing the use of non-biodiversity friendly agro-chemicals. There would be no efforts to develop a sustainable agricultural production system on a broad scale that enhances biodiversity habitats and forest corridors. Community participation under the baseline scenario would consist primarily of awareness enhancement activities. The tendency to convert rustic coffee plantations to technified coffee plantations and pristine forests to coffee plantations would continue at a rapid pace with the consequent loss of crucial forest habitats.

GEF Alternative

The GEF Alternative would be a program that specifically addresses the threats to biodiversity in the buffer and influence zone of the El Triunfo Biosphere Reserve through economic, social and environmental sustainable production. It would counter a dangerous trend towards unsustainable coffee production systems and instead would promote biodiversity-friendly management practices that would increase the amount of forest cover and biodiversity within the Reserve as compared to the baseline.

The GEF Alternative would build on the baseline scenario and would include complementary activities, as described in Section II D. Total cost of the GEF Alternative is estimated at US\$4,727,400, broken down by activity as follows: (a) nucleus conservation (US\$1.03 million), same as baseline; (b) disaster prevention and mitigation (US\$600,000), same as baseline; (c) community participation (US\$866,600); (d) sustainable production systems (\$1.3 million); and (e) native species conservation (US\$0.93 million). The proposed MSP would be entirely incremental and would not substitute for existing levels of financing from government agencies or other funding sources.

The GEF Alternative would generate both *domestic* (in the buffer and influence zones) and *global benefits*. *Domestic benefits* would mainly be generated through the economic and social viability and sustainability of the proposed project's activities. The principal beneficiaries of these benefits would be small coffee farmers and their communities. The project activities are designed to be sustainable as, e.g., farmers would have to pay for coffee certification services, which are expected to increase the value of their crops in the export market. The increased value of coffee exports in turn would ensure the sustainability of the biodiversity friendly coffee production in the absence of continued GEF support. The potential increase in Gross Domestic Product for the communities that directly benefit from the GEF alternative and other intangible domestic benefits, such as protection of watersheds, soil resources, or biodiversity resources have not been calculated. These benefits are the justification for non-GEF funding of the project's incremental cost. *Global benefits* that would contribute to the above stated global environment objective would mainly be generated through environmental sustainability of the sustainable production concept. In

the context of the El Triunfo Biosphere Reserve environmental sustainability would specifically include reducing the threats to biodiversity and native species that are caused by the small producers and their communities.

Incremental Cost. The cost of the Baseline Scenario is estimated at US\$2.61 million, and the cost of the GEF Alternative is estimated at US\$4.73 million, resulting in an incremental cost of US\$2.12 million. The involvement of GEF at an early stage of project concept development and preparation permitted significant leveraging of domestic and international funding that would not otherwise have been forthcoming. As a result, the agreed incremental cost requested from GEF is limited to \$725,000. This cost-sharing of MSP incremental costs also recognizes that the GEF Alternative will generate domestic benefits as well as global biodiversity benefits. Co-financing of incremental costs will total US\$1.39 million, as shown in the summary Incremental Cost/Financing Plan Table presented below.

Incremental Cost Table

	Baseline	Alternative	Increment	GEF	Co-financing to GEF
Conservation of Nucleus Areas in the Reserve	1,030,000	1,030,000			
Prevention and Mitigation of Natural Disasters	600,000	600,000			
Community Participation	430,000	866,600	436,600	251,000	185,600
Sustainable Production	311,300	1,302,700	991,400	313,000	678,400
Native Species Conservation	235,000	928,100	693,100	161,000	532,100
Total	2,606,300	4,727,400	2,121,100	725,000	1,396,100

IV. BUDGET

The budget presented does not include parallel funding.

Components (US\$)	GEF	Government Counterpart	IDESMAC	Other Sources	Total
Personnel	68,280	122,600	22,000	2229,000	441,800
Subcontracts	310,000	86,140		64,500	460,640
Workshops	98,000	2250		30,310	130,560
Training	119,000	4,000		7,410	130,410
Goods	52,000	532,500	61,000	38,310	683,810
Travel Expenses	32,000	23,210		79,400	134,610
Miscellaneous:	45,800	11,000	5,000	77,470	139,270
TOTAL	725,000	781,700	88,000	526,400	2,121,100
GEF Total (MSP+PDF A)	750,000	-	-	-	-

V. PUBLIC INVOLVEMENT PLAN

Beneficiaries and Stakeholder Identification

Communities, Small Producers and their Organizations: About 1500 small coffee producers in 20 communities and seven local producer organizations are expected to participate and benefit from the project. Direct beneficiaries would be the inhabitants of the buffer zone of the El Triunfo Biosphere Reserve and local coffee growers' organizations. The communities that have been most closely involved in the planning phase of the project are Laguna del Cofre, 3 de Mayo, Plan de Ayala, and Santa Rita las Flores, as well as several small property owners. Among the farmers' organizations who are stakeholders are: Campesinos Ecológicos de la Sierra Madre de Chiapas, Indígenas y Campesinos Ecológicos de Angel Albino Corzo, Indígenas de la Sierra Madre de Motozintla, Unión de los Ejidos de Villa Mapastepec, Unión de los Ejidos Progresistas de Acacoyagua, S.S.S. 30 de Agosto, and S.S.S. Flor de Toronjil de la Sierra. These groups would participate in training activities, farmer-farmer events to share experiences, and institutional strengthening. Owing to the project's characteristics, no social group would be negatively impacted by project implementation. As the project proceeds, the number of beneficiaries should steadily increase throughout all social groups, with the most notable positive impact for poverty-level rural farmers and their families. The project activities would explicitly address issues of gender integration in the participation process and the technical extension service.

Non-governmental Organizations: NGOs with interest in conservation inside the El Triunfo Reserve include Produce Chiapas, Conservación Internacional México (CI), The Nature Conservancy (TNC), Rainforest Alliance, Fundación de Apoyo Infantil (FAI), and Pronatura Chiapas. They would participate by developing complementary projects for marketing, certification, and training.

Government: The federal and state agencies whose activities relate to the project are SEMARNAP, INE, IHN, INI, and SAGAR.

The majority of organizations and institutions involved with the El Triunfo Biosphere Reserve are represented in the *Technical Advisory Council* of the Reserve. This Council provides advisory support for decisions in the administration, conservation, management, development and operation of the Reserve. (See detailed description of the TAC under Project Implementation).

Stakeholder Participation

Based on the participation process that was initiated during project preparation (see chapter G 'Stakeholder Involvement'), project execution would expand and deepen its participation strategy. Project activities are specifically designed to embrace *beneficiary participation* in all project components, such as promoting participatory techniques and tools, community workshops for participatory planning, implementation and monitoring, support of self-evaluation processes, horizontal and vertical communication, learning and innovation processes, community-based research, monitoring of flora and fauna with communities, etc. Other *Stakeholder participation* would be ensured through project activities, including defining a strategy for technical assistance services based on success of activity, developing a vision of cooperation between institutions and local organizations for the project's objective and its follow-up, developing a platform for environmental information exchange, etc. Sharing experiences, disseminating information, and strengthening communication between stakeholders is therefore an integral aim of the project. Many of these results will be visualized by stakeholders and thus become their property. A webpage has been created which will ensure information dissemination beyond the project setting and would contribute to knowledge management among initiatives in the region.

VI. PROJECT IMPLEMENTATION PLAN

An inter-institutional and inter-disciplinary team '*Grupo Operativo*' (*Operational Group*) represented by three organizations: IDESMAC, INE, and IHN would steer the project (i.e. means follow objectives and results). It would be guided on technical and scientific issues on coffee production by the '*Consejo Consultivo para el Proyecto*' (Project Advisory Council). With respect to broader biodiversity issues

concerning the Reserve, the existing *'Technical Advisory Council (TAC)'* would provide guidance. Actual project execution would be in the hands of the stakeholders in the communities supported by their local organizations and regional institutions.

IDESMAC is a non-profit private organization devoted to sustainable development and natural resources conservation. *IDESMAC* employs 13 researchers/technicians specialized in several disciplines. *IDESMAC* would have a leading responsibility for implementation of technical assistance services of the project. Its primary role would be facilitating communication among stakeholders and supporting project activities. The project coordinator would be *IDESMAC* staff, who would be supported by a core technical team of three to four specialists in the area of agricultural extension services, bio-prospecting, community participation, and institutional strengthening. Furthermore, *IDESMAC* would be responsible for financial and procurement administration, and would be the main interlocutor of the World Bank. Project resources would be administered directly by *IDESMAC*, which would apply these funds according to the World Bank and Mexican legal norms and the activities from this proposal.

INE staff would play a supportive role in the implementation and monitoring of the project. Their specific areas of co-responsibility within the project would be on community participation and systems of sustainable production. Furthermore, *INE* would provide logistical support during the project and would coordinate the elaboration of new projects as a result of the work of the communities. *IHN*, part of the state government of Chiapas, is responsible for diffusion, investigation and conservation of the natural resources in Chiapas, especially for natural protected areas. *IHN* has five specialized staff for handling, investigating and monitoring flora and fauna in the Reserve. The institution has played an important role in the establishment of the Biosphere Reserve and has specific responsibility for the Administration. Under the project it would contribute with activities with the communities on preparation of flora and fauna diagnostics and for coordinating research activities by *ECOSUR* and the Ecology Institute. It will also provide logistic support and material.

A cooperation agreement has been signed between *INE* and *IDESMAC* and another agreement will be signed between *INE* and *IHN*. An agreement between the three agencies will establish the different roles and tasks under the project.

An *Project Advisory Council ('Consejo Consultivo para el Proyecto')* with leading technical experts in the required areas of the project was established during project preparation. This Council's purpose would be to follow-up on key technical questions-- in particular with respect to coffee production and its diversification -- being raised during project implementation from the communities and their organizations. It includes experts²⁰ in five areas of coffee production: organic crop management, biological pest control, diversification, management and certification. The members of the Advisory Council are representatives from the following Mexican organizations: *INIFAP*, *ECOSUR*, *UACH*, *ISMAM* and *CERTIMEX* (Mexican Certifier). Participation of representatives of the last institution is pending. Cooperation agreements between the first four institutions are under preparation.

The *'Technical Advisory Council (TAC)'* of the El Triunfo Biosphere Reserve was established in May 1994 under the GEF 'Protected Areas' Program. The purpose of this Council is to provide an institutionalized forum for representatives of all stakeholder groups of the Reserve for technical discussions, exchange of experience and knowledge, and joint decision making. Currently it includes 23 members from the following areas: six from the social sector (grassroots organizations), seven municipal presidential representatives, one private lands representative, four representative of the academic sector²¹ and four

²⁰ For the project's Advisory Council the following four specialists with ample experience in the management of coffee have already been selected: Esteban Escamilla, M.Sc. (*UACH*) is an expert in production systems. Dr. Juan F. Barrera (*ECOSUR*) is an expert on biological pest control. Dr. Alfredo Zamarripa (*INIFAP*) is an expert on technological and artificial improvement of coffee varieties, and is the National Coordinator of Coffee Research. These three researchers are responsible at the national level for the degree program on coffee management, which is highly esteemed in Mexico. The fourth member of the Council, Presbyter Jorge A. Aguilar Reyna, is the chief advisor for *ISMAM*, and has extensive experience in organizing techniques for grassroots farmers' groups.

²¹ *IHN*, *ECOSUR*, *UNICACH* and *UNACH*

representatives from the government sector.²² With respect to broader biodiversity issues concerning the Reserve, the existing *TAC* would provide guidance.

²² INE, SEMARNAP, SEDESOL, SERNYP and CNA

Summary Project Implementation Plan

DURATION OF PROJECT (IN MONTHS): 36						
ACTIVITIES	PROJECT-MONTHS					
Completion of project activities	6	12	18	24	30	36
1 Community participation						
1.1 Introduce technical staff in participatory techniques and tools through training.	*****					
1.2 Hold community workshops for participatory planning, implementation and monitoring.	***** **					
1.3 Support self-evaluation processes of farmers and communities.	** ** ** **					
1.4 Promote local organizations and leadership.	*****					
1.5 Define strategy for technical assistance services based on success of activity.	*****					
2. Sustainable Production Systems.						
2.1 Create and validate small producers models for diversified production.	*****					
2.2 Review potentials for ecologically sound products and support their sustainable use.	*****					
2.3 Develop and promote effective certification for bio-diversity-friendly coffee.	*****					
2.4 Promote horizontal and vertical communication and learning between farmers, producer organizations, technicians and their institutions on local and regional levels.	*****					
2.5 Promote community-based and action-oriented small-scale research on bio-diversity-friendly methods for coffee production.	*****					
2.6 Strengthening of marketing for biodiversity-friendly products through corresponding organizations.	*****					
3. Native Species Conservation						
3.1 Develop a vision between institutions and local organizations for the project's objective and its follow-up (distribution of responsibilities for indicators).	* * * * *					
3.2 Monitor flora and fauna with communities.	*****					
3.3 Support participatory environmental education and awareness programs.	*****					
3.4 Pilot the creation of agreements and rules with communities on land use for biodiversity hotspots.	*****					
3.5 Develop a platform for environmental information exchange.	*****					

VII. MONITORING AND EVALUATION

Monitoring and Evaluation would have three layers: (i) biodiversity monitoring through communities and satellite imagery (GIS), (ii) project administration monitoring, and (iii) Bank supervision.

Biodiversity monitoring through communities and satellite imagery (GIS): These monitoring activities are integrated within the project activities, namely under Components 1 and 3. Workshops with community-based agricultural promoters would be held to evaluate progress using indicators based on the perspectives of the principal stakeholders (the farmers and communities).

Project administration monitoring: IDESMAC, through the Project Coordinator and his team, would have the primary responsibility for monitoring project implementation and would process the monitoring data

into a Management Information System. IDESMAC would prepare annual progress reports and annual reports for the World Bank on project implementation. The Reserve's Director (INE) and his team would support IDESMAC in their operational responsibility for monitoring and evaluation. The project's Advisory Council would play an active role in project monitoring and would submit to the TAC a biannual evaluation. The TAC of the El Triunfo Biosphere Reserve in its overall responsibility of monitoring the management of the Reserve would review project progress.

Bank supervision: Project monitoring and evaluation activities would be supervised by Bank supervision missions. The Bank would receive regularly project implementation reports that relate to each component of the project. Annual performance benchmarks are being developed which would complement the end-project indicators in the Summary Sheets and which would trigger disbursements during the project implementation period. A mid-term and an implementation completion report would be prepared to take stock of project performance and extract lessons learned.

Annex 1: Contributions of other Donors

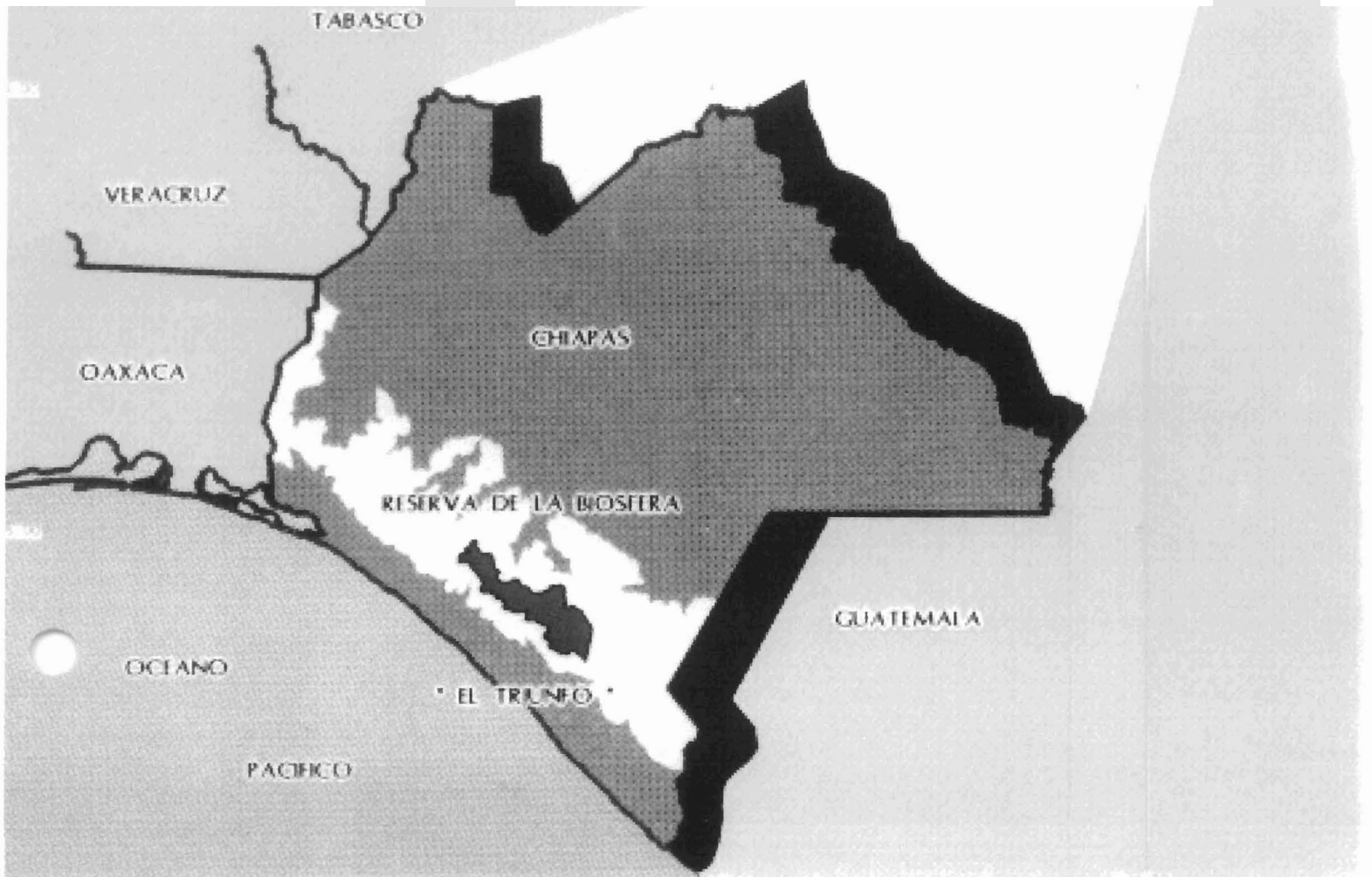
Annex 2: Map of El Triunfo Biosphere Reserve

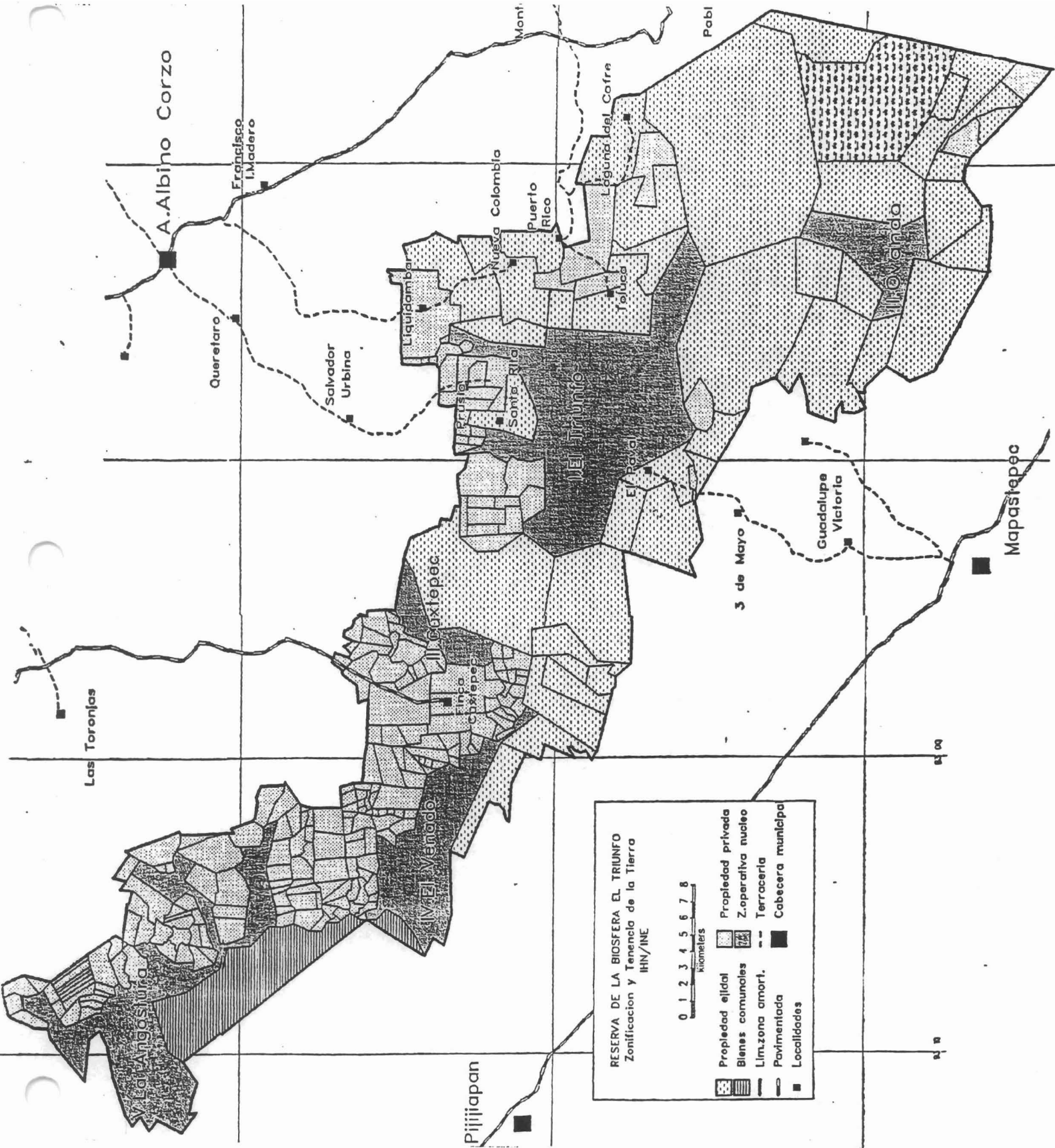
Annex 3: Preliminary Certification Criteria

**OTHER DONORS CONTRIBUTIONS TO PROJECT ACTIVITES
(US\$000)**

Activity	Other Contributors (all in-kind)
1. Community participation	185.6
Workshops	12.6 INE
Training	88 IDESMAC
Promote Local Participation	30 Pronatura
	40 INIFAP
	15 IICA/GTZ
2. Sustainable Production Systems	678.4
Develop biodiversity certification	239.4 Rainforest Alliance
Technical Assistance	18 UACH
	12 IICA/GTZ
	179 INIFAP
Train certifiers	200 Rainforest Alliance
	30 PRONATURA Chiapas
3. Native Species Conservation	532.1
Monitor Flora and Fauna Promote	198.9 IHN
Public Awareness	112.7 ECOSUR
	220.5 Rainforest Alliance
TOTALS	1,396.1

MAP





A. Albino Corzo

Francisco I. Madero

Queretaro

Salvador Urbina

Liquidambar

Nueva Colombia

Puerto Rico

Laguna del Cofra

Pabi

Vilovendo

El Triunfo

El Paval

Guadalupe Victoria

Mapastepec

Las Toronjas

Cuxtpepéc

Tinpa Cuxtpepéc

El Venado

La Angostura

Pijijiapan



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PRELIMINARY CRITERIA FOR BIODIVERSITY FRIENDLY COFFEE

The following is the preliminary criteria proposed in the workshop held last February in Xalapa, Veracruz. This event was organized by the Smithsonian Migratory Bird Center and sponsored by the Environmental Cooperation Commission of the North American Free Trade Agreement.

Topic	Criteria	Recommendations
Forest Coverage	1. Minimum of 40% after pruning.	
Structural Diversity	1. Average height of 12 meters at the canopy level, not including new vegetation. 2. Several natives trees per hectare or planted trees up to ≥ 15 meters.	
Flora Diversity	1. "Spinal Cord" of the shade (dominating species) must be native and should not be more than 70% of the total density. 2. On the remaining 30% at least one third of species must originate from natural forest of the area. 3. The total number of species must required per hectare will be determined by the size of the land (according to a variable scale of curve/arc species). 4. Evidence of re-growth of new trees of considerable size and longevity (specially natural forest trees) through the spread of species, protection of new trees, and nurseries.	1. Premium for slow growth species of big heights. 2. Maintenance of keystone species. (<i>Ficus spp.</i> , avocado, etc.). 3. Preserve if possible plans and herbs related to the .
Pruning	1. The extraction of epiphites is not allowed as a management practice.	Dead trees should not be cut down.
Soils	1. Keep the soil covered permanently with compost or vegetation. 2. In cases of steep slopes and high precipitation soil management practices are required.	
Pesticides and Fertilizers	1. No pesticides are allowed (herbicides, insecticides, fungicides, etc.). In some cases the use limited use cooper sulfate and its byproducts will be allowed to control fungus related decease.	
Water and native flora conservation	1. Water conservation practices should be used. 2. The growers will not discharge water mill residues to the rivers in accordance to federal and state regulations.	
Landscape	1. In bigger land plots (50 ha or more), a 10% forest reserve is required for watershed protection.	An additional premium will be granted for any special efforts to preserve native forest.

G.H. 1



SECRETARÍA DE HACIENDA Y CRÉDITO PÚBLICO

DIRECCION GENERAL DE CREDITO PUBLICO
DIRECCION DE ORGANISMOS FINANCIEROS INTERNACIONALES
Subdirección de Proyectos Ambientales y de Desarrollo Urbano

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Oficio No. 393. III. 4.- 109

-> copy to Ina Rudenberg

México, D.F., a 27 de abril de 1998

SR. OLIVIER LAFOURCADE
Representante en México del Banco Mundial
Insurgentes Sur 1605, piso 24,
Colonia San José Insurgentes
C i u d a d

7º ABR. 1998

Hago referencia al Proyecto de Conservación de la biodiversidad a través del café sustentable y productos asociados en la Reserva de la Biosfera "El Triunfo", que será apoyado con recursos del Fondo Mundial para el Medio Ambiente (GEF).

Sobre el particular, a través del presente me permito comunicar a usted que el proyecto de referencia cuenta con el apoyo tanto de esta Secretaría de Hacienda y Crédito Público como de la Secretaría de Medio Ambiente, Recursos Naturales y Pesca, por lo que le solicito atentamente que por su amable conducto, se inicien los trámites correspondientes ante el GEF con el objeto de contar con apoyo para el mencionado proyecto a la brevedad posible.

Mucho le agradeceré nos mantenga informados del trámite que guarden estas gestiones, y sin otro particular por el momento, aprovecho la ocasión para reiterar a Usted las seguridades de mi más atenta y distinguida consideración.

A t e n t a m e n t e,
SUFRAGIO EFECTIVO. NO REELECCION.
El Director de Organismos Financieros Internacionales



Ricardo Ochoa
Ricardo Ochoa