



Global Environment Facility

Mohamed T. El-Ashry
Chief Executive Officer
and Chairman

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June 26, 2001

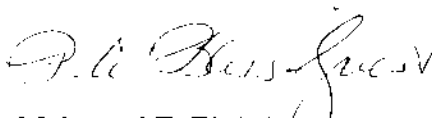
Dear Council Member,

UNDP, as the Implementing Agency for the project, *Mexico: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve*, has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with UNDP procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by the Council in November 2000 and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by UNDP details how Council's comments and those of the STAP have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at www.gefweb.org. If you do not have access to the Web, you may request the local field office of UNDP to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,


Mohamed T. El-Ashry
Chief Executive Officer
and Chairman

cc: Alternatc, Implementing Agencies, STAP



United Nations Development Programme
GLOBAL ENVIRONMENT FACILITY



25 May 2001

Mohamed:
Dear Mr. El-Ashry,

Subject: MEX/00/G32 – Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

I am pleased to attach herewith the above mentioned project document. The brief was approved by the GEF Executive Council in November 2000. Also attached is our response to the comments raised by the GEF Council.

As per paragraph 29 and 30 of the GEF Project Cycle, we are submitting this project document for circulation to the members of the GEF Executive Council and, subsequently, for your final endorsement.

Thank you in advance for expediting the review and approval of this project.

Best regards

Yours sincerely,
Rafael
Rafael Asejo
Executive Coordinator

Mr. Mohammed El-Ashry
Chief Executive Officer
Global Environment Facility
Room G6005
1776 G Street
Washington D.C. 20433

Response to Council Technical Review Matrix

Review issue	Addressed/justification	Mention in document
1. General comments on proposal		
<p>Germany:</p> <p>1. Public-private partnerships are made between government agencies and the private sector and are different from co-operations between public institutions and NGOs.</p>	<p>In the Mexican legal context an NGO is considered a private, non-profit institution, thus the wording used in the project brief. GESG in particular was established as a private assistance institution (Institución de Asistencia Privada –IAP-) that provides technical co-operation services to local communities (Ley de Inversiones Extranjeras, Art. 2º).</p> <p>The project will build upon an existing partner relationship between GESG and CONANP, formalised in a Memorandum of Understanding (MOU) to be signed by both parties and made available to the implementing agency before project execution.</p> <p>Private sector (companies) involvement in project implementation is considerable as both large corporations (such as SHELL) and private small holders are to be strategic partners in commercial plantations and other productive activities defined in the context of Output 5.</p>	<p>Paragraph 22</p> <p>Paragraph 52 and 54</p>
<p>2. Why a budget of 4.6 million to “implement adaptive and participatory reserve planning and management” (Output 3), if community involvement in the management of the SG reserve is already considered to be a best practice in this respect?</p>	<p>The GESG experience is considered a best practice in terms of community participation for grassroots involvement in the management of a Biosphere Reserve. Nevertheless as stated in the base line descriptions in the project brief (please refer to baseline for further information) GESG’s scope of intervention has been limited to a reduced number of projects in a few core areas. Paragraph 70 has been re-phrased taking into account the council member’s comment. On the basis of the identified threat analysis, these activities are clearly insufficient under the business-as-usual scenario, to be able to arrest the main threats to biodiversity in the area.</p> <p>As a necessary and indubitably incremental alternative scenario, Output 3 responds to the need to expand the scope of participatory reserve management beyond the reserve limits. This will secure local capacity to directly address and coordinate efforts for alternative use regimes and complementary conservation mechanisms and ultimately diversify and expand the impact of local efforts in environmental education.</p>	<p>Paragraph 70</p> <p>Paragraph 63</p>
<p>3. Further information about GESG, to better understand their role in the project, considering that they are involved in various functions.</p>	<p>In response to the council member’s request the project team has prepared a separate annex describing the GESG in more detail especially with regard to their institutional capacities relevant to the project and their main project implementation functions.</p> <p>Far from being a subcontractor, GESG has been designated (prior formal delegation) by the GoM as project executing agency and therefore fully co-responsible for project results. GESG capacities will be strengthened accordingly to undertake upscale action. This arrangement is fully consistent with the National Protected Areas System, especially in reference to decentralized park management, promotion of co-responsibility for conservation efforts and development of local capacities. Institutionally, an MOU signed by the CONANP confers responsibility to the GESG for critical management functions in the area. GESG relies on its comparative advantage at the community level and is backstopped</p>	<p>Annex M</p>

Comments raised by GEF Secretariat answered on September 15th, 2000 during approval process of Project Brief.

	by existing network of national and international partners.	
4. Communication with other GEF funded projects, in particular SINAP 2, how can mutual exchange of experiences be secured, so as to improve the workings of the entire protected area system in Mexico?	<p>The policy interaction and complementarity of this project with the SINAP 2 project, has been officially defined in two communiqués prepared by the GOM, dated January 4 2000 and June 27 2000 and included here as an addendum to this response matrix.</p> <p>CONANP has officially appointed GESG to undertake a replication campaign to the benefit of many priority areas included in SINAP II. This initiative was rolled-out during a SINAP II planning workshop celebrated the week of February 5, 2001.</p> <p>Finally, considering the council member comment, the institutional arrangements have been reformulated in the project document to incorporate other GEF project co-ordinators in the Interagency Council to help optimise composite performance.</p>	<p>Addendum</p> <p>Paragraph 61</p> <p>Paragraph 69</p>
<p>France:</p> <p>5. Project design seems expensive and financially unsustainable compared to the SINAP 2 project, considering that only 25,000 hectares out of a total of 380, 000 will be protected.</p>	<p>The proposal is a priority measure for the Environment Ministry and supports government policies that help develop differentiated management policies corresponding to the wide variety of social and ecological conditions found in the protected areas of Mexico. These conditions justify the planned full-scale intervention.</p> <p>In contrast to SINAP II, a bottom-up approach for sustainable development policies has been utilized during project preparations and will be further developed under the project implementation to provide better linkages between community-level problems and the state- and federal-level policies designed to address them.</p> <p>Conservation effort will not be restricted to the 25,000 hectares of core areas of the Reserve, rather it will include nearly 340,000 hectares of vegetation that harbour globally significant biodiversity (30% of Mexico's butterflies species and many endemic and endangered cacti and arid land species; see annex on biodiversity). Conservation of this globally important biodiversity will be secured through a phased approach where GEF funded interventions primarily will be used to construct pilot experiences with conservation and alternative livelihoods in selected areas where a variety of threat, ecosystem characteristics and social dynamics are present. Such experiences will consequently be replicated throughout the rest of the biosphere reserve to ensure sustainable conditions in core, influence and outlying areas of impact on the biodiversity of Sierra Gorda.</p>	<p>Paragraph 67</p> <p>Paragraph 22</p> <p>Paragraph 25-27</p>
6. The GESG anticipates to collect a recurrent annual income of US\$ 200,000 through rural forest planting programs, who will pay for such services, what services will be provided and how much land is involved?	<p>Interested parties in paying for the services of the GESG in developing sustainable forest plantation schemes include the multinational company Shell, the federal governmental plantation programmes and local communities and their social enterprises. All of these partners have confirmed interest in contracting GESG's technical assistance services with different but converging interests including climate change, biodiversity considerations, local and international economic considerations and environmental goods and services.</p> <p>The services that will be provided vary in each case, but fundamentally would range from facilitating the initial design of</p>	<p>Paragraphs 48-49</p> <p>Annex A, Sections 3.16-</p>

Comments raised by GEF Secretariat answered on September 15th, 2000 during approval process of Project Brief.

	<p>plantation modules suited to each specific case, clarifying property issues/landownership, training of local counterparts to co-manage the plantation ventures together with proper equipment to operate the plantations, shared monitoring and evaluation programs, facilitation of governmental support, training and backstopping for marketing and commercialisation of higher value added forest products.</p> <p>The plantations will be located in areas that were cleared for agriculture or livestock activity and that are eroded and/or highly disturbed by human intervention. Three principle benefits are expected: the creation of new, more sustainable jobs; a reduction of pressure on the natural ecosystems of the region through increasing vegetation cover with native species, and the recovery of eroded lands that are inappropriate for agricultural use.</p> <p>The areas suited for such sustainable community commercial forestry initiatives, cover a surface of approximately 15,000 hectares, both within and outside Reserve limits. Currently, only 7,000 hectares are fully feasibly for forestry projects. It is expected that the economic benefits generated in this initial phase will create sufficient incentives for other small holders to participate in commercial plantations, expanding the number of hectares under forested use. The immediate target of this project will be these 7,000 hectares and the intervention promotes the active involvement and ownership of up to 4,000 small owners with severely reduced economic opportunities.</p> <p>Alternative income options are considered in the project document. As suggested by the council member total beneficiaries of this productive activities are relatively limited (approximately 235 families). However, the activities have been designed based on threat analysis and are situated in hot spots of anthropogenic pressures in critical habitats. Income derived from these activities is vital in terms of sustainable livelihood and income diversification, as it will most directly benefit women in poor to very poor communities.</p> <p>The rationale behind the political decision of withdrawing this project from SINAP II is presented in point 5 and officially documented in the letter dated 27 June 2000 appendix to this matrix.</p>	3.18
<p>Switzerland: 7. Information provided in Annex B (Logical Framework) suggests that co-financing indicated is not committed but instead a planned output of the project itself.</p>	<p>Objectively verifiable indicators in the log frame refer to disbursement performance and implementation for any project component as one of several process indicators for monitoring project progress. Therefore, project co-financing is in no way a result of the project but a necessary operative pre-requisite. Accordingly, reference in the project document's Annex B has been made more specific.</p> <p>The level of co-financing for this project is adequate by GEF biodiversity project standards. Regarding the possibility of obtaining firm government co-financing commitments, it is important to note that administrative cycles in Mexico range from 3 years (municipal) to 6 years (state and federal), and that a new federal administration assumed office in December 2000.</p>	<p>Pages 24-32</p> <p>Paragraph 20</p>

Comments raised by GEF Secretariat answered on September 15th, 2000 during approval process of Project Brief.

	<p>Government funds are routinely programmed on a yearly basis, with no provision for “rollover”. Thus the challenge of continuous efforts to confirm and secure co-financing, is perceived as one of the principle project objectives and operative arrangements have been designed accordingly.</p> <p>Finally, the Federal Administration, through the Environment Ministry, has pledged full support for the consolidation of GESG in the context of the project. In addition to expanded financing for the Federal Reserve office as part of direct counterpart funding, additional resources will be made available through the sustainable forestry and plantation subsidy programs. Current agreements between GESG and the federal government on emergency employment funds have been renewed and expanded for the first year of project implementation. The Environment Ministry has also taken a leading role in the dialogue with the other two principle co-financiers, SAGAR and SEDESOL, whose financial commitments have been confirmed and are in the process of being articulated to the project context throughout the Sierra Gorda and its influence zones.</p> <p>Complementary local co-financiers will reserve the right to select and approve individual projects, and will monitor project advances utilising GESG project performance evaluation methodology. The monitoring function will help turn the co-financiers into full, active partners in the evaluation of project results. Many have already been engaged in initial productive projects in the Reserve.</p>	Paragraph 49
<p>8. Concern about the focus and resilience of GESG as a single NGO with multiple responsibilities in the project implementation:</p> <p>a) including the fact that their main experience does not prepare them for their expected role as business brokers and service providers</p> <p>b) the lack of information on how this NGO was selected for the identified project tasks</p>	<p>The institutional experience and absorptive capacity of GESG demonstrated and described in further detail in Annex M of the project document. GESG relies on its comparative advantage at the community level and is backstopped as needed by certified technical consultants or institutions and an existing network of national and international partners.</p> <p>Far from being a mere subcontractor, GESG has been delegated by the GOM as project executing agency and therefore co-responsible for project results. This decision will be officially formalised in a MOU and made available to the implementing agency before project execution. GESG capacities will be strengthened accordingly for undertaking upscale action in the context of this project.</p> <p>However, in light of the council member’s observation a transparent outsourcing methodology has been further specified in the project document and appropriate terms of reference (Annex G and H) and budget implications have been incorporated (Annex C). The implementing agency national execution standards and regulations are specifically designed to avoid conflict of interests by any of the parties. Accordingly, a multi-party Contract Committee will be accountable for personnel issues and NEX procurement procedures will be applied in contracting service providers.</p>	<p>Annex M</p> <p>Paragraph 69 and Annex M</p>

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<p>c) the diverse roles of the GESG within project implementation</p>	<p>See Annex M regarding GESG's experience.</p> <p>In general, the observation that the GESG will be occupying diverse roles within the implementation scheme is correct. However, as mentioned above, the project specifically provides for a strengthening of their capacity and their areas of action will be expanded through the project. This arrangement arises from the unique trajectory of the NGO, their proven capacity and acceptance at both federal and local levels and as such their central role to guaranteeing the sustainability of ongoing and planned interventions in the area.</p> <p>In each case the capacity of the GESG will be evaluated and their capacity will be complemented by strategic alliances with local, national and international partners to optimize project performance.</p>	<p>Annex M</p> <p>Paragraph 82</p>
<p>9. Roles of some of the involved parties are not sufficiently clarified and seem to mix up the responsibilities of implementation and supervision.</p>	<p>As a response to the council member comment clarifications have been made within the section on implementation arrangements to indicate broad distribution of responsibilities.</p>	<p>Paragraph 69</p>
<p>10. The information on the expected outputs is very general and does not allow for a comprehensive assessment of the activities planned, seems that too many of the decisive project activities will be defined during project implementation.</p>	<p>Project activities were fully defined during project development, although margin has been left for adaptive project management where critical market studies evaluating economic, social and environmental impacts of alternative livelihoods option that have been proposed under output 5 will guide the development of demonstrative productive modules. These will then be replicated throughout the areas of the reserve.</p> <p>A comprehensive workplan has been incorporated as Annex. F In light of the council member observations the narrative text of project outputs have been complemented and a detailed plan of activities is included the pages 32-38 of the project document.</p>	<p>Pages 32-38</p> <p>Pages 13-20</p>
<p>11. The system of monitoring and evaluation is not clearly defined.</p>	<p>A monitoring and evaluation system will be applied to the project, building on GESG's field experience. As detailed in the project document, project indicators have been identified for financial performance (annual disbursement), social participation (operation of TAC, number of agreements signed with communities, etc.), economic sustainability (number of fully operational sustainable use projects, internal rate of return, economic impact in region) and biological monitoring (charismatic species, key ecosystem indicators). Additionally, a protected area "scorecard" will be maintained for the Reserve, providing a readily measurable benchmark for fully operational protected areas in Mexico.</p> <p>A GIS system will be used to identify the changes at the landscape level. Current information exists only at a scale of 1:250,000 which is insufficient for conservation or sustainable use purposes. Efforts are under way to obtain information at the 1:50,000 scale through collaboration with a series of specialized agencies. During the project, site-level mapping will be carried out at a scale of 1:10,000 for productive projects in the forestry sector. This level of detail is necessary for the proper implementation of individual forestry management programs, and will contribute to reducing illegal logging and encroachments by providing accurate information to small holders.</p> <p>Monitoring activities will also be carried out to measure the socio-</p>	<p>Paragraph 80-82</p>

Comments raised by GEF Secretariat answered on September 15th, 2000 during approval process of Project Brief.

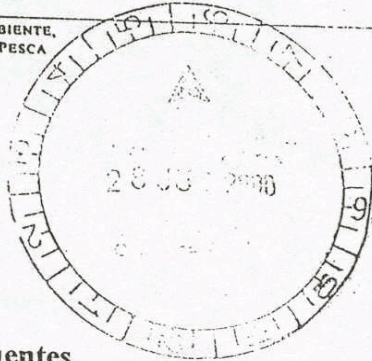
	<p>economic impact of project activities. These activities will build on GESG's existing capacity for accurately measuring social conditions in the greater Sierra Gorda region, and include both economic and well-being indicators at the household level.</p> <p>Finally UNDP will apply national execution monitoring and evaluation procedures, that include tight project implementation control through the active use and updating of project work plans, financial reporting, operative steering committee meetings, budget revisions, annual external audits, annual project implementation reviews, annual project progress inform, annual tripartite review, continuous project control through compound analysis in UNDP Mexico's computerized project management system, external international evaluations at the end of phase 1 and 2 and finally a designated programme officer in weekly contact with key counterparts and realizing regular missions to the region to ensure adaptive management in the project implementation.</p>	
<p>12. Risk of dispersing efforts in many activities, especially considering the fact that most of them are assigned to one only organisation with corresponding high risks of failure due to organisational overload.</p>	<p>See answers under questions 3 and 8 b) above regarding the selection process that will be used to guarantee sufficient organisational capacity and minimize risks of failure due to organisational overload.</p>	
<p>13. Doubt regarding whether all the sustainable use activities that the GEF in part will fund, are incremental, and emphasis on the fact that alternative livelihoods options by themselves are no guarantee to biodiversity conservation.</p>	<p>A considerable increase will take place in the national sustainable development baseline as a result of the project to ensure that the part funded by the GEF corresponds strictly to incremental activities. All the components that GEF will fund within sustainable use, basically corresponding to output 4, are related to pre-feasibility studies, pilot marketing and management arrangements, monitoring and evaluation systems, innovative conservation and use modules and organisational and institutional strengthening to guarantee the sustainability of such productive initiatives.</p> <p>The project design is anchored by a thorough threats and root cause analysis on the biodiversity of the area, which were used precisely to identify the design and specific location of the sustainable use modules. Based on the identified baseline course of action these results lead the project developers to consider different approaches to arrest biodiversity degradation in the area. Accordingly the project has been designed in 2 phases with initial efforts concentrated on identified pilot areas where innovative approaches to conservation and sustainable use will be adapted on a small scale, before being applied widely in the region in the subsequent phase.</p> <p>While important, it is clear that the identified investments in modifying livelihoods under output 4 will be insufficient to fully achieve conservation goals. Recognising this, a number of complementary interventions have been designed, aimed at creating the institutional architecture, policy and fiscal framework and other conditions precedent to success. Regional-level management actions are accompanied by site-specific efforts to create new conservation mechanisms, and by capacity-building, social organisational strengthening, awareness raising and advocacy activities to build constituencies for conservation.</p>	<p>Paragraph 12, 13, 14</p> <p>Paragraph 20</p>

Comments raised by GEF Secretariat answered on September 15th, 2000 during approval process of Project Brief.

<p>14. The description of project outputs and activities (with indicators) does not incorporate the carbon sequestration impacts, such impacts should be specified, quantified and corresponding indicators developed.</p>	<p>In light of the council member's comment, carbon sequestration objectives were refocused and downsized. Initial projections of 5,000 hectares of old forest under protection via carbon sequestration have been reduced to 1,000 hectares. Efforts will be centred on old-growth forest that is currently imperilled and unprotected by the reserve decree. Findings will be used to expand the potential for carbon sequestration in the region, and to prove the efficacy of the methodology used under rural conditions.</p> <p>Approximate estimates for the entire project intervention in terms the carbon sequestration impacts will be systematically gathered during project execution, divided by the main direct project components such as reforestation, plantations and recuperation initiatives promoted by the project. There will also be a scenario estimate covering the whole reserve area and the direct influence areas with respect to both the direct and indirect carbon saving impacts of the project.</p>	<p>Paragraph 81</p> <p>Paragraph 81</p>
<p>15. No actual strategy exists for compiling project experiences and promote later replication.</p>	<p>Success demonstrated by GESG in developing an initial model for participatory protected areas management has many lessons for other forested and mountainous protected areas in Mexico (approximately 10M hectares). SEMARNAT is currently negotiating institutional agreements that will provide a formal framework for training courses and capacity building exercises to be imparted by GESG to other federal park system staff in partnership with SEMARNAT's Centre for Environmental Education for Sustainable Development.</p>	<p>Paragraph 79, Annex A, section 3.19</p>



**Unidad Coordinadora de
Asuntos Internacionales**



UCAI/3309/00

México D.F., 27 de junio de 2000

Eduardo Fuentes
Principal Especialista en Biodiversidad
División de Medio Ambiente Global
Programa de Naciones Unidas para el Desarrollo

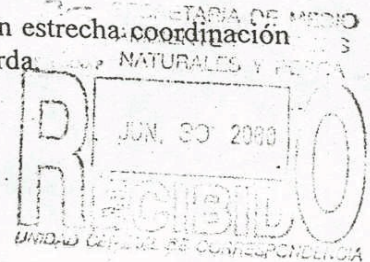
Presente

Me permito hacer referencia al proyecto denominado "*Conservación de la Biodiversidad en la Reserva de la Biosfera Sierra Gorda*", promovido por la Organización No Gubernamental (ONG) Grupo Ecológico Sierra Gorda I.A.P. en coordinación con esta Secretaría, y con el apoyo técnico del Programa de Naciones Unidas para el Desarrollo (PNUD) como Agencia Implementadora, para consideración de financiamiento del GEF.

Como es de su conocimiento, en el marco de la preparación del proyecto *México: Consolidación del Programa de Áreas Naturales Protegidas (SINAP II)* con el Banco Mundial, se había contemplado la inclusión de la Reserva arriba mencionada, como una de las áreas naturales protegidas elegibles para el apoyo del fondo patrimonial custodiado por el Fondo Mexicano para la Conservación de la Naturaleza.

En función de lo anterior, y de acuerdo a las políticas de conservación establecidas por esta Secretaría y sus órganos desconcentrados competentes en la materia, me permito comunicarle la decisión de México de excluir la Reserva de la Biosfera Sierra Gorda del alcance del proyecto SINAP II, para poder concentrar actividades de mayor alcance en la región bajo el proyecto "*Conservación de la Biodiversidad en la Reserva de la Biosfera Sierra Gorda*".

Lo anterior, en el entendido que el proyecto se realice por la ONG en estrecha coordinación con, y en apoyo de la Dirección de la Reserva de la Biosfera Sierra Gorda.



Agradeciendo de antemano la atención se sirva prestar al presente, aprovecho la ocasión para enviarle un cordial saludo.

Atentamente



José Luis Samaniego Leyva
Titular de la Unidad

- ccp. Julia Carabias Lillo, Secretaria de Medio Ambiente, Recursos Naturales y Pesca.
Para su superior conocimiento.
- ccp. Kenneth King, Assistant Chief Executive Officer, Secretariado del GEF.- Presente
- ccp. Bruno Guandalini, Representante en Residencia del PNUD en México.- Presente
- ccp. Olivier Lafourcade, Director para México del Banco Mundial.- Presente
- ccp. Ricardo Ochoa Rodríguez.- Director de Organismos Financieros Internacionales de
la Secretaría de Hacienda y Crédito Público.- Presente
- ccp. Javier de la Maza Elvira, Titular en funciones de la Comisión Nacional para Áreas
Naturales Protegidas.- Presente
- ccp. Lorenzo Rosenzweig Pasquel.- Director General del Fondo Mexicano para la
Conservación de la Naturaleza.- Presente
- ccp. Celia Piguero Wirz.- Directora de Captación Financiera y Cooperación
Internacional de la Comisión Nacional para Áreas Naturales Protegidas.- Presente
- ccp. Martha Ruiz Corzo.- Directora de la Reserva de la Biosfera Sierra Gorda.- Presente
- ccp. Oralia Camacho Montes.- Presidenta del Grupo Ecológico Sierra Gorda I.A.P..-
Presente



Al contestar este oficio, favor de citar el número UCAI



**UNITED NATIONS DEVELOPMENT PROGRAMME
PROJECT OF THE GOVERNMENT OF MEXICO**

PROJECT MEX/00/G32

Title: Biodiversity conservation in the Sierra Gorda Biosphere Reserve

Short Title: Sierra Gorda

Starting Date: 01/06/2001

End Date: 01/06/2008

Executing Agent: NEX - Secretaria de Medio Ambiente, Recursos Naturales

Implementing Agent: NEX - Secretaria de Medio Ambiente, Recursos Naturales

Project Site: Queretaro, San Luis Potosí, Guanajuato and Hidalgo

Beneficiary Countries: Mexico

ACC Sector/Subsector: BIOLOGICAL RESOURCES - NATURAL RESOURCES

DCAS Sector/Subsector: Natural resources - Environmental preservation and rehabilitation

Primary Areas of Focus/Sub-Focus: Promoting Poverty Eradication and Sustainable Livelihoods - Reduction of poverty through natural resources management

Primary Type of Intervention: Direct Support - Advocacy and strategic-oriented

Primary Target Beneficiaries: Target Organizations - Government - Governmental organizations

Summary of UNDP and Cost-Sharing Inputs in US\$ as per attached budget(s)

INPUTS	
UNDP:	0
1G-Global Environment Trust Fund	6,730,610
TOTAL INPUTS	6,730,610
TOTAL	6,730,610

Brief Description:

The project will promote biodiversity conservation in the Sierra Gorda Biosphere Reserve. Among the protected areas in Mexico, the Sierra Gorda has the highest degree of biodiversity, due to great altitudinal variations and a heterogeneous rain pattern. It harbors a total of 14 vegetation types, several of global importance, with high levels of species endemism, presence of charismatic species and the unique representation of a transition zone between two biogeographic regions. Although its natural integrity is largely intact, extensive cattle and goat ranching, inefficient agricultural practices, inadequate forest management, poaching, and solid waste pollution threaten the integrity of the Reserve's dynamic ecosystem.

Approved by:

Signature:

Date:

Name/Title:

Secretariat of Environment, Natural Resources (National Commission for Protected Areas)

Dr. Ernesto Enkerlin,
Director

Secretariat of Environment, Natural Resources (Unit for Coordination of International Affairs)

Dra. Olga Ojeda,
Head

Secretariat for Finance and Public Credit (Unit for International Financial Organizations)

Lic. Ricardo Ochoa,
Director General

Secretariat for Foreign Relations (IMEXC)

Lic. Rosalba Ojeda,
Director General

United Nations Development Programme (UNDP)

Bruno Guandalini,
Resident Representative

PROJECT DOCUMENT

1. IDENTIFIERS

Project Number:	MEX/00/G32/A/IG
Title:	Biodiversity conservation in the Sierra Gorda Biosphere Reserve
Duration:	7 years (in 2 phases)
Implementing Agency:	United Nations Development Programme (UNDP)
Executing Agency:	Secretariat of Environment and Natural Resources (SEMARNAT)
Requesting Country:	Mexico
Eligibility:	CBD ratification on 11 March 1993 Notification of participation in the restructured GEF on 17 May 1994.
GEF Focal Area:	Biodiversity
Programming Framework:	OP 3: Forest ecosystems with linkages to OP 4: mountainous ecosystems, OP 12: Integrated Ecosystem and Resource Management, and Land Degradation.

2. SUMMARY: The project will promote biodiversity conservation in the Sierra Gorda Biosphere Reserve. Among the protected areas in Mexico, the Sierra Gorda has the highest degree of biodiversity, due to great altitudinal variations and a heterogeneous rain pattern. It harbors a total of 14 vegetation types, several of global importance, with high levels of species endemism, presence of charismatic species and the unique representation of a transition zone between two bio-geographic regions. Although its natural integrity is largely intact, extensive cattle and goat ranching, inefficient agricultural practices, inadequate forest management, poaching, and solid waste pollution threaten the integrity of the Reserve's dynamic ecosystem.

This project will mitigate such immediate threats and their fundamental causes through the implementation of an alternative management model in the Reserve, that promotes shared responsibilities between the Sierra Gorda Ecological Group, an NGO, and the State, represented by the National Commission for Protected Areas. Existing management capacities will be strengthened through training of current and additional central and local staff, expanded infrastructure and equipment, improved coordination through existing institutional frameworks and the development of long-term alternative funding sources. To ensure operational sustainability, the project will strengthen a self-financing scheme based on a progressively increasing coverage of the Reserve recurrent costs through service provision. This approach will form part of the National System of Protected Areas (SINAP) menu of financial regimes available in the country for biodiversity conservation. Socio-economic and biological appraisals will reinforce the design and implementation of conservation and sustainable livelihood interventions in the Reserve and its immediate buffer and influence areas, to ensure strategies are differentiated according to local conditions and use categorization as established through land planning. The project will take a bioregional approach to conservation, demonstrating and formalizing alternative conservation schemes for private lands and community-owned lands (ejidos) that build upon existing use traditions and community involvement. Special attention will be given to the promotion of sustained conservation awareness throughout the Reserve and its immediate surroundings, including the creation of public-private partnerships that would fundamentally change the land use on the predominantly privately owned land in the Reserve. Operations would be consolidated gradually across the Reserve's landscape as conservation and sustainable livelihood options are tested and institutional capacities developed.

The Government of Mexico is presently working with the GEF Secretariat and the Implementing Agencies to develop a 5-10 year Partnership Framework for GEF support of biodiversity conservation initiatives in Mexico. This Programmatic Framework specifically provides for the development of pilot conservation models in some areas that demonstrate alternative and innovative management approaches. Clearly, the Sierra Gorda Biosphere Reserve provides a vehicle for experimentation with public-private partnerships and decentralization of management that could expand the range of management instruments available. If successful, the model may have wide replication potential in other protected areas in Mexico.

3. **COSTS AND FINANCING (MILLION US\$)**

		Phase 1	Phase 2	Total
GEF		3,495,736	3,234,874	6,730,610
	Sub-Total	3,495,736	3,234,874	6,730,610
CO-FINANCING	GESG	1,892,204	845,166	2,737,370
	SEMARNAT	2,289,372	675,428	2,964,800
	SAGAR	1,329,680	288,320	1,618,000
	SEDESOL	2,384,130	1,122,770	3,506,900
	CONABIO	50,000	0	50,000
	CONACYT	50,000	0	50,000
	Gov. Queretaro	145,300	54,700	200,000
	Private	1,142,000	858,000	2,000,000
	Packard Foundation	589,950	205,050	795,000
	Sub-Total	9,872,636	4,049,434	13,922,070
TOTAL PROJECT COST		US\$ 13,368,372	US\$ 7,284,308	US\$ 20,652,680

4. **ASSOCIATED FINANCING** (Baseline): Estimated at US\$ 11,071,040 over seven years.

5. **GEF FOCAL POINT ENDORSEMENT**

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List of Acronyms

CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species
CNA	National Water Commission
CONABIO	Commission on Biodiversity Knowledge and Use
CONACYT	National Science and Technology Council
CONANP	National Advisory Council on Protected Areas
CONAPANP	National Commission for Protected Areas
COPLADES	State Development Planning Committee
DGVS-UMAS	INE's Director General's Office for Wild Life Management
FCCC	Framework Convention on Climate Change
FANP	National Fund for Protected Areas Management
FONAES	National Fund to Support Social Enterprises
FRMU	Federal Reserve Management Unit
GEF	Global Environmental Facility
GESG	Sierra Gorda Ecological Group
GoM	Government of Mexico
INE	National Institute for Ecology (SEMARNAT)
INEGI	National Institute for Statistics, Geography and Informatics
NCC	GEF National Coordination Committee
NGO	Non-governmental Organization
NPD	National Development Plan
PG7	PG7 Consultores
PMA	Environment Programme 1995-2000
PROCYMAF	Conservation and Forest Resources Sustainable Management
PRONARP	National Programme for Attention to Priority Regions
PRODEFOR	Forestry Development Programme
PRODEPLAN	Commercial Forestry Plantations Development Programme
PRODERS	Sustainable Regional Development Programme
PROFEPA	Office of the Federal Environmental Protection Attorney
PRONARE	National Reforestation Programme
RAN	National Agrarian Registry (Registro Agrario Nacional)
SAGAR	Secretariat of Agriculture, Livestock and Rural Development
SCT	Secretariat of Communications and Transportation
SECOFI	Secretariat of Trade and Industrial Development
SECTUR	Federal Tourism Secretariat
SEDENA	Secretariat of National Defense
SEDESOL	Secretariat of Social Development
SEMARNAT	Secretariat of Environment and Natural Resources
SEP	Secretariat of Public Education
SHCP	Ministry of Finances
SIARP	Information System for the National Programme for Attention to Priority Regions
SINAP	National System of Protected Areas
SRA	Secretariat of Agrarian Reform
SER	Secretariat of Foreign Affairs
SSA	Secretariat of Health
TAC	Technical Advisory Council
TNC	The Nature Conservancy
UMAS	Sustainable Wildlife Management Units
UNCANP	INE's former protected Areas Coordination Unit, now CONAPANP
UNDP	United Nations Development Programme
WWF	World Wildlife Fund and/or World Wide Fund for Nature

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I. Project Context

1. Environmental context: Mexico is one of the twelve countries with the greatest biological diversity. Fauna and flora together count for more than 10% of the biological diversity of the planet (Toledo and Ordoñez 1993). It has the highest count of reptiles, the second highest count of mammals and the fourth highest variety of plants and amphibians recorded by any nation (Mittermeier 1998). Furthermore, Mexico is distinguished for its high incidence of endemic species, with more than 900 endemic vertebrate species, and up to 70% endemism in some plant families (i.e., Cactaceae and Agavaceae). Recent technical reports indicate that Mexico is the country with the highest ecological diversity in the Americas (Dinerstein *et al* 1995). The determinants of this extraordinary wealth include the nation's rugged topography, varied climate, and complex bio-geographical history. Approximately 30% of Mexico's territory is forested. Forests provide a number of vital ecological functions, including carbon storage and accumulation, sustaining hydrological cycles, and stabilizing soils. Yet, despite their importance, Mexico's forests are being lost at an alarming pace, with some estimates placing forest loss between 600,000 and 700,000 hectares per year. The country may have lost as much as 95% of its original tropical forest cover, more than half of its temperate forest biomes and of its semi-arid vegetation (Dirzo 1992). Concern for the protection of ecosystem diversity in Mexico has grown considerably over the past decade.

2. The Sierra Gorda Biosphere Reserve (Reserve) is located in east central Mexico, in the northern extreme of the State of Queretaro, with a total surface of 383,567 hectares that represent 32% of the State's territory. The Reserve has 11 core zones of 24,803 hectares (6.4% of the total Reserve surface area) and a buffer zone of 358,764 hectares (93.6%). Well-preserved ecosystems in the Reserve constitute a total surface of 253,000 hectares (66%). See maps in Annex G.

3. Because of its location in a transition zone between two bio-geographical regions in Mexico, the Reserve harbours 14 types of vegetation, thus constituting the richest ANP in the country in terms of ecosystem diversity. Its physical and biotic characteristics have generated a biological store with a great number of species. Although the flora inventory of the Reserve has not yet been completed, 1,724 vascular plant species and 124 fungi species have been reported so far, many of them endemic. The Reserve's ecosystem has served as a centre for Cactaceae speciation and endemism, including the *Mammillaria bucarelensis* and *Coryphanta jalpanensis*. A number of species are under some kind of protection (i.e., magnolia, ocotillo, maguey, aguacatillo, zapote, and cilantrillo). Forests occupy 268,250 hectares (70% of the Reserve), with the largest extension comprised of dry tropical forest, temperate forest and scrub brush. Fauna reports in the Reserve identify 589 vertebrate species to date, with 363 birds, 131 mammals, 72 reptiles, and 23 amphibians. It holds around 30% of the country's lepidoptera species. As with flora, many of these species are now under some kind of protection (i.e., jaguar, Humboldt butterfly, black bear and military macaw). Annex J provides a more full description of the Reserve's globally significant biodiversity.

4. Socio-economic context: The Reserve's population of 93,336 inhabitants is dispersed in 638 communities, many with fewer than 100 inhabitants. Only *Jalpan de la Sierra* has a population over 5,000. The Reserve is considered one of the most densely populated in the country's National Protected Areas System (SINAP). The annual population growth rate in the Reserve is 1.73%, being the highest in the State of Queretaro. Over the past 50 years, demographic growth combined with inefficient productive systems, a lack of employment in the region and a poor provision of public services, have resulted in extreme poverty for most of the inhabitants of the Reserve. Indeed, the region shows some of the lowest social and economic development indicators in Mexico. Unemployment affects more than 30% of the economically active population and 79% of the economically active population receives an income equivalent to less than US\$ 6 per day. More than 23% of the Reserve's population is illiterate, and only 31.5% have finished primary education in contrast to 59.1% statewide.

5. Over 60% of the economically active population within the Reserve derives their principle livelihoods from the primary sector. Extensive livestock husbandry has grown over the past few years (taking place in about 56% of the Reserve) and is characterized by low income-yielding capacity as a result of poor genetic

quality and inadequate technology. Apiculture and aquaculture activities have been only marginally explored, in spite of the great potential in the region. Smallholders extract different forest products from a total area of 13,000 hectares, or 4% of the Reserve total surface. Agriculture is practiced in an area of 13% of the Reserve and is primarily for auto-consumption. Slash-and-burn agriculture is widely practiced, on slopes ranging from 12 to 70 degrees, contributing to the deterioration of the natural resource base. Maize and beans figure prominently among the main agricultural products, principally for self-consumption, accompanied by a relatively small production of fruits and coffee. Under the Agrarian Law, land is set aside for agricultural use by communes. These are called *ejidos*, and are responsible for land use planning, allocation and management, and for enforcing federal or local regulations that circumscribe land uses in the public interest. In the Reserve, 30.67% of the land is administered under the *ejido* system, and 69.33% as private property. Private property is therefore the primary local vehicle of land use planning within the Reserve, which may constitute a deciding factor in the future integrity of the Reserve.

6. Policy context: Since the establishment of the 1995-2000 *National Development Plan* (NDP), that emphasizes the need to balance economic, social and environmental objectives and encourages the active involvement of civil society in environmental management, high priority has been assigned to the establishment and management of protected areas. The NDP's *Environmental Programme* defines conservation, protection and sustainable use of protected areas' biodiversity as one of its primary strategies. These strategies are compiled and developed in the *Natural Protected Areas Programme* that focuses its action on extending conservation activities to new actors, and promoting co-responsibility for biodiversity conservation with civil society. One of the key strategies for the long-term integrity of the country's protected areas is the creation in 1996 of the National System of Protected Areas (SINAP), comprised of 117 protected areas. The Sierra Gorda ranks seventh among these.

7. Furthermore, with assistance from GEF, the Government of Mexico (GoM) has recently finalized a *National Biodiversity Strategy*, which flags 4 pillars of conservation management: i) protection and preservation of ecosystems; ii) assessment of biodiversity; iii) management of information on biodiversity; and iv) diversification of the use of natural resources. This Strategy has framed and guided many of the current Federal Administration's priorities and programmes. The Action Plan for this National Strategy is currently in the initial planning stages and will follow an extensive and innovative participatory process. Side-by-side with the Action Plan formulation, the GoM is working with the GEF Secretariat and the implementing agencies to develop a 5-10 year Programmatic Framework for biodiversity conservation and sustainable use. This framework is nearing completion, and provides the strategic context for this project. In the State of Queretaro, where the Reserve is located, the 1998-2003 *State Development Plan* outlines a medium-term development agenda, providing for an integrated political approach consistent with the UNDP-promoted human development paradigm. In December 2000 a new Government will take over the administration in Mexico. Based on the discussions held so far between the transition team of the new government and the present administration, there are strong indications that the major in-situ conservation policies of the current Government will be continued. Rather, changes are expected in the way federal support programs allocate their funds. It is expected that federal support allocations will be made following more transparent processes and increased decentralized decision making than in previous administrations.

8. Legal context: The *Planning Law* provides a legal framework and set of guiding principles for the execution of the National Development Plan and related sectoral programmes. The principal environmental statute in Mexico is the *General Law of Ecological Equilibrium and Environmental Protection* (LGEEPA), enacted in 1988 and amended by congressional consensus on December 13, 1996. A specific section of the Law deals with biodiversity, providing the legal framework for Protected Areas. *The Organic Law of the Federal Public Administration*, (enacted in 1994), provides for the creation of SEMARNAT and defines its functions and legal responsibilities. Other key legal provisions related to the environmental sector include the *Federal Hunting Law* (1996), regulating taking of wildlife; and the *Forestry Law* (1996) which regulates forestry, including protection, restoration, reforestation and production from a development perspective. In addition to the Laws mentioned above, other legal instruments with relevance for environmental management include the *Fishing Law*, the *Federal Law of Plant Varieties*, the *Agriculture Law*, the *Plant*

and Animal Health Laws, the National Water Law, Agrarian Law and General Human Settlement Law (1993). Other Legislation and specifications to Laws, such as Presidential Decrees, complete this framework.

9. Institutional context: SEMARNAT is the environmental ministry, with overall responsibility under national legislation to carry out regulatory functions relating to the environment, including forestry, fisheries, agriculture, urban and industrial sectors, air quality (climate change) and watershed management. This includes oversight of compliance with environmental standards, administration of protected areas and other special management zones created to protect natural resources, and coordination of the country's response to global initiatives, including international Conventions. The National Commission for Protected Areas is a semi-autonomous agency of SEMARNAT, responsible for protected area management. To provide expert and independent advice on the national protected areas system, the National Advisory Council on Protected Areas (CONANP) was established, composed of experts from the academic, private, social, government and non-government sectors. CONANP has recently reviewed the status of the 117 protected areas that comprise SINAP, assigning priority status to 39 protected areas. For these priority protected areas, SEMARNAT has consolidated basic conservation activities through the creation of Federal Reserve Management Units (FRMU), and stakeholder consultation bodies known as Technical Advisory Councils.

10. In addition to SEMARNAT, a number of other federal agencies hold shared responsibilities for rural development and land use management. The Attorney General's Office for Environmental Protection (PROFEPA) is responsible for prosecuting offenders for infringements of environmental legislation, and is a semi-autonomous SEMARNAT agency. SAGAR is the Ministry of Agriculture and has overall responsibility for promoting and managing agricultural and rural development, supporting both smallholders and large-scale producers. SEDESOL (Ministry of Social Development) is responsible for social development and poverty alleviation, including promotion of social enterprises and food security. The Ministry of Communications and Transportation (SCT), is responsible for constructing infrastructure such as roads and telecommunications. Please see chart in Annex I outlining institutional relationships.

11. Mexico has embarked on a far-reaching administrative decentralization programme, which should see the gradual transfer of functions and budgets from the capital to the municipalities and states. Municipalities are responsible for town planning; defining and enforcing zoning requirements in settlements, including villages and hamlets. Municipalities are also responsible for providing public utilities, such as water supplies and waste management systems. Mexico's 31 States share responsibilities with federal agencies for delivering government services, and have in most cases created institutional structures that mirror those created at the federal level. The Queretaro State Government has been the pioneer in the country to create a Ministry of Human Development, responsible for the execution of human development policies at the state level.

II. Baseline Activities

12. Threats: The Sierra Gorda Biosphere Reserve is one of the most densely populated protected areas in Mexico. It is located at the intersection between four States (Queretaro, San Luis Potosi, Hidalgo and Guanajuato), which operate under different administrative regulation, environmental enforcement practices, human settlement patterns and land-use management regimes. These factors contribute significantly to the complexity of threats and root causes that threaten the biological diversity of the Reserve. For the Federal Reserve Management Unit (FMRU) and its diverse management bodies, this complex mosaic of policies underlines the importance of strengthening its policy negotiation capacity.

13. There are a variety of threats, mainly of anthropogenic origin, the impact of which can be observed from studies on the population dynamics of important species, soils and water quality, the distribution of land use patterns, and the status of habitats within and between ecosystems. The percentage of lost forest cover provides a striking indication: the Sierra Gorda Biosphere Reserve has lost a large percentage of its natural forest cover during the past few decades (at the average rate of 550 ha per year). There are five main threats

to the Reserve's biodiversity, namely a) **extensive cattle and goat ranching**; b) **inefficient agricultural practices**; c) **wildfires and inadequate forest management practices**; d) **poaching**; and e) **pollution from solid wastes**.

- a) **Extensive cattle and goat ranching:** Cattle ranching is among the most damaging threat to the biodiversity in the Reserve, covering extensive areas and using inefficient pasture-use techniques. This has resulted in extensive over-grazing, leading to significant deforestation and land erosion throughout the Reserve, as well as contributing to the spread of alien invasive species. The total area dedicated to cattle and goat ranching in the five municipalities that constitute the Reserve is 268,342 hectares. In spite of its marginal economic return, goat ranching is extensive, damaging the soils and the natural vegetation, such as the pine groves "Pinal de Amoles" and the semi-arid scrub found in the Reserve. Pig farms exist in limited enclosures and, as such, do not directly damage the natural vegetation. However, wastewater from these farms does pollute the tributaries of several ecologically important rivers within the Reserve.
- b) **Inefficient agricultural practices:** Farming systems are characterized by very low productivity (0.4-0.8 tons/ha of corn and beans, which are the staple subsistence crops grown in the area). This is in part due to a lack of better alternatives that is evidenced by inadequate practices, such as cultivation on steep slopes, slash-and-burn agriculture and uncontrolled use of agro-chemicals. Current agricultural practices ignore the natural vocation of the soils and the consequences include rapid decline in soil fertility, erosion, deforestation and soil and water pollution. Due to the scattered settlements and continuous immigration, the agricultural frontier continues to expand deeper and deeper into the forested areas of the Reserve, increasing threats to many important habitats. Fruits and legumes are also cultivated in the Reserve for both commercial purposes and local consumption, and represent an interesting alternative source of income for many communities. However, this activity lacks coordination and tends to make excessive use of chemical fertilizers.
- c) **Inadequate forest management and wildfires:** Of the 120,000 Ha of oak and pine forests found within the Reserve, only 13,000 hectares are currently harvested under a forestry exploitation system. There are six sawmills in the Reserve, which generate a series of forestry products and timber residues that are left unutilized. The added value given to these products is minimal, given the combination of outdated and inefficient equipment and unskilled operating personnel. The process for granting logging permits is currently very time consuming in relation to the small amounts of timber extracted, thus promoting extensive irregular and illegal logging practices. There is also substantial logging for fuelwood in areas near the local communities as well as selective extraction, especially for species with high market values (such as red cedar, now quite rare in the area). Forest fires are largely the result of the use of fire to clear forests for agricultural purposes. The yearly impact of forest fires varies widely. Between the period of 1993-1997, an average of 230 ha was affected each year within the Reserve.
- d) **Poaching:** A small number of people are charged each year for breach of hunting regulations, but the actual amount of poaching is much more widespread, as evidenced by irregular growth rates in specific species. General knowledge of present wildlife laws and hunting regulations is lacking, and enforcement is a difficult task for the local communities. Young people from small communities often poach for domestic consumption and target practice within the Reserve. Bird and mammal species such as the white-tailed deer and the peccary (a type of wild boar, *Jabalí de Collar*) are often poached and locals frequently hunt mountain lions, jaguars and coyote, because of the perceived threat to their livestock.
- e) **Solid waste pollution:** The total daily production of solid waste within the five municipalities of the Reserve amounts to 45 tons, which on a yearly basis represents 16,465 tons of waste. In general, this waste is compiled in outdoor garbage dumps and/or public waste-treatment plants, without proper sorting and recycling to minimize environmental impacts. This human-derived waste pollutes rivers and soils well beyond the point of its immediate release, and contributes significantly to reduce water and soil quality in significantly critical ecosystems within the Reserve.

14. Root causes: As identified by community assessments, the above-mentioned threats can be attributed to the following root causes:

- Widespread poverty throughout the reserve: 79% of the population earns less than two minimum daily wages about 60 pesos (US\$ 5.80)
- Extensive and inefficient land use practices that stem from the lack of appropriate skills, market opportunities, access to financial inputs, and structural economic problems
- Lack of local environmental awareness and appreciation of the values imbued in the ecosystems present in the Reserve
- Lack of experience and incentives to develop alternative resource utilization and conservation frameworks within local communities and in privately owned land
- Few *fora* that promote communal exchanges and local networking, in order to share experiences related to the management of natural resources
- Insufficient appropriation of land use categorization as indicated in the Biosphere Reserve management plan, which together with deficient incentives and the lack of community organization leads to little or no enforcement at the local level
- Weak enforcement by the state governments and the Attorney General's Office for Environmental Protection (PROFEPA)
- Insufficient organization and capacity to prevent and fight wildfires
- Lack of access to water, which limits the potential of fodder production for stall-feeding of livestock, thus leading to extensive overgrazing and ecological deterioration of forested areas
- Federal support programmes promote unsustainable land use patterns that have contributed to environmental damages
- Lack of technical, human and institutional capacities among government and civil society organizations responsible for conservation

15. Baseline programmes: The baseline course of events in a business-as-usual scenario is described below in accordance with the project outputs deemed necessary to conserve the biological heritage of the Reserve.

16. PA planning and management: The Management Plan of the Reserve (hereafter the Plan) prepared and published by INE-SEMARNAT in September 1999, provides for an overall planning framework for the interventions of this project. This Plan is one of the tangible outputs of the project development phase and is product of an extensive series of consultations, pilot experiences, and consensus building activities between productive sector, government and civil society. The participation of local communities of the state of Queretaro in the planning process is considered a best practice in the context of the National Programme for Natural Protected Areas 1995-2000 because of their active involvement in project preparation. Although fully engaged during the preparatory phase, local communities need to be further strengthened and supported in their capacity to collaborate in defining precise and synchronized specific interventions in the Reserve and at the landscape level. Furthermore, next planning steps will focus on intensifying stakeholders' involvement, to expand the scope of consultations and consensus building to the municipalities and State governments of the three other surrounding states (Guanajuato, Hidalgo and San Luis Potosi).

17. A Federal Reserve Management Unit (FRMU), financed by CONAPANP, is currently charged with carrying out traditional management functions, and has limited capacity to implement vital activities such as threats appraisal, data gathering, surveillance, and enforcement. GESG, in partnership with INE-SEMARNAT has piloted sustainable land use experiences demonstrating an outstanding capacity to work with local communities and grassroots organizations. During the past few years, this partnership has shown clear advantages in implementing shared or delegated management functions, based on their comparative institutional advantages. While this experience is perhaps novel among the protected areas in Mexico, its full potential has so far been limited by constraints on spending levels, a lack of an enabling institutional context and underdeveloped capacities. A Technical Advisory Council (TAC) has been established and has obtained initially promising results in terms of convening capacity and consensus building around the Plan. Given the

administrative and economic conditions of a region that comprises four different states and widely heterogeneous economic structures, any lasting solution requires inter-state, broad based and cross-sectoral coordination of policies. To allow an effective mainstreaming of development policies into conservation objectives, the TAC must therefore upgrade to a multi-agency, local framework for environmental planning and management, and to coordinate and adapt state policies and municipal programmes.

18. The Reserve was decreed on incomplete baseline biological assessments, and any future monitoring efforts will be constrained by a lack of comprehensive data. Inventories and monitoring of birds, mammals, reptiles, diurnal butterflies and some plant groups have been prepared and carried out. Research has been conducted on flora endemism status, military macaw biology and conservation, and on insect community composition along altitudinal gradient. Individual researchers and national universities including Autonomous University of Queretaro, Autonomous University of Mexico, Technology Institute of Superior Studies of Monterrey and University of Valle in collaboration with the Science and Technology Council of Queretaro have gathered available biological data but no effort has been made to systematize them. Up-to-date and effective zoning and management decisions both lack the guidance that would be provided by a comprehensive ecological database containing information on keystone and endangered species and on the different habitat types. As a general rule, current knowledge of the Reserve's geology, hydrology, hydrographic regimes, and ecology is limited and data is dispersed. To begin to address this issue, the State Government of Queretaro is funding the development of a geographic information system (GIS), that will nevertheless require scaling up to be made compatible with national GIS system databases. Other state governments have not undertaken equivalent initiatives to provide for an over-all baseline reference to conservation and sustainable use management. Incremental efforts are needed to map ecologically vulnerable areas in need of protection, to assess ecological, hydrological, and geological processes, and to plan and adopt long-term ecological damage mitigation programmes.

19. Conservation and rehabilitation: Taking into consideration actual threats, the current conservation status of the Reserve has been obtained through a number of actions to promote surveillance and enforcement as well as rehabilitation. Since the Reserve's decree in 1997, first INE-UCANP, and now CONAPANP have supported the minimum management structure necessary to carry out basic conservation functions. Reserve management has been keen on channeling federal resources from the National Programmes for Reforestation and Wildfire Prevention and Control to the Reserve. GESG has assisted in the creation of four local species nurseries that have made possible the conservation and rehabilitation of key habitats within the Reserve and has undertaken complementary environmental awareness and community-based oversight actions. GESG has also carried out programmes for the construction of highly efficient wood-burning stoves, for the installation of dry latrines and for the establishment of community centres for solid waste recollection. Mandatory audits of forest exploitation quotas, illegal hunting, provoked fires for productive purposes and illegal clearings are currently undertaken by the Attorney General's Office for Environmental Protection. The inter-secretarial temporary employment programme involving SAGAR, SEDESOL and SEMARNAT has channeled public investments to activities such as soil conservation and the establishment of fire lines. To attain sufficient coverage and impact to protect the globally significant biodiversity of the Reserve within its boundaries, these experiences need to be scaled up significantly.

20. Sustainable livelihoods: A number of livelihood support packages have been promoted in the region. The National Programme for Sustainable Forestry Management has created state rosters of forestry service providers that validate and approve forestry management programmes in the region. In addition to contributing directly to rehabilitation activities in the Reserve, the Programme to Promote Temporary Employment co-executed by SEDESOL-SAGAR and SEMARNAT provides subsistence level income to Reserve inhabitants on a temporary basis. SAGAR's subsidy programme PROCAMPO has supported the conversion of cyclical cultivars to perennials, to some extent reducing annual uncertainty and repeated start-up investments. A number of organic agriculture initiatives have received minimal state government support, but in general lack the comprehensive approach that would combine technical support with market integration. These programmes have proven to be wholly insufficient to adapt productive systems to accommodate conservation objectives and to offer the necessary stimuli for widespread adoption of

sustainable use options. A special effort is needed to re-gear traditional development investments to ensure their compatibility with biodiversity conservation. The State of Queretaro has taken the promising steps to increase the sustainable livelihood baseline through the creation of the country's first state-level Ministry for Sustainable Development. Current funding levels are modest, and practical demonstrations of sustainable natural resource use are urgently required to help further define the role and programmes of this important new ministry. This would include providing local producers with win-win economic and technological solutions that marry immediate economic impact with long-term globally significant conservation. Critical factors to consider include local systems of soil and water conservation, and existing constraints on land, capital and labour.

21. **Conservation awareness:** Long-term conservation in the Sierra Gorda region will only be achieved if key decision-makers in government, the private sector, and civil society are sensitized to the conservation value of the area. In cooperation with the Sustainable Development Network supported by UNDP, GESG has produced a series of pamphlets, posters, brochures and maps describing the significance and value of the Reserve's biodiversity. GESG has designed an environmental education programme that has reached more than 70% of primary school students and 25% of secondary school students in Reserve municipalities. Nevertheless, this program needs to continue for the long-term as well as replicate itself within the Reserve and her zones of influence. On the whole, public awareness of conservation values and of the relevance of conservation to development objectives is poor. GESG produces a weekly radio programme that is transmitted in the local station and in two stations in the State's capital. The group also has published columns in local and State periodicals, and has been the subject of special report at the national and international level, notably in public television. Television has been the media for a few important campaigns at the State level, and the presence acquired by this medium has been supported by diverse fund-raising events. Despite all of these actions, a wider and well-targeted educational mass media programme to impart conservation values to local children is lacking at the regional level, especially in the neighbouring areas of surrounding States. Adequate environmental awareness has been identified as a critical component for the long-term integrity of the region.

III. Alternative Course of Action

22. **Project strategy:** The development objective of this project is **to conserve the biodiversity of the Sierra Gorda Biosphere Reserve**, which contains globally significant biodiversity. The project strategy is based on the approach taken by the Ecological Group of Sierra Gorda (GESG) over the past 12 years to promote biodiversity conservation. This approach is characterised by the integration of ecosystem and resource management, stemming from the fusion of specific local biophysical, socio-economic and cultural factors, coupled with a range of conservation and sustainable use options. This project will build upon the significant potential of the special relationship between the GESG, FRMU and the TAC in the co-management of the Reserve. In particular, the project will formalise this public-private co-management framework and demonstrate the full potential benefits generated by co-responsibility between an NGO and a state agency in conservation promotion and enforcement.

3.1. IMMEDIATE OBJECTIVES, OUTPUTS, INDICATORS AND ACTIVITIES

23. There are two immediate objectives of this project. The first is to strengthen management capacities in order to sustain efforts for the conservation and sustainable use of the Reserve's globally significant biodiversity over the long-term. The second immediate objective is to increase the value of biodiversity conservation and sustainable use so as to ensure long-term sustainability of project benefits. In order to achieve the first objective, the project will undertake activities to produce four outcomes:

- Output 1: Reserve management infrastructure is strengthened.
- Output 2: Policy, ecological and socio-economic baseline assessments are undertaken.
- Output 3: Implementation of adaptive and participatory Reserve management.
- Output 4: Financial sustainability of Reserve management is assured.

The second objective will be met by two additional outcomes:

Output 5: Biodiversity-friendly and sustainable alternative livelihood options are developed and demonstrated.

Output 6: An environmental education and public awareness campaign is undertaken.

24. Project objectives will be achieved through a mix of management capacity strengthening, establishment of monitoring and evaluation systems together with socio-economic and biological assessments, demonstration of sustainable livelihood options and increasing environmental awareness and consciousness among stakeholders in the Reserve.

25. Project phases: The project will be phased over seven years to allow the approaches promoted by the project to be developed gradually and agreed upon with the relevant stakeholders. This will permit the design and demonstration of overall intervention modules that can easily be replicated initially in areas with similar conditions and subsequently in other areas within the Reserve and its immediate influence areas.

26. The first phase will be implemented over a four-year period, and will focus conservation efforts in five of the 11 core areas, representing half of the total core area coverage. These areas were selected in accordance with a set of criteria including the globally significant biodiversity, threats, and the demonstrated abilities and commitment by the relevant communities. The first phase activities will also represent a strengthening of the enabling conditions by integrating biodiversity-friendly resource management into development frameworks (e.g., policies, plans, programmes). The second phase will be implemented over the remaining three years of the project, and will focus on the conservation efforts for the remaining core areas of the Reserve as well as to replicate the biodiversity-friendly and sustainable alternative options demonstrated in the first phase. A specific goal of the second phase is to secure appropriate land from the neighbouring states as buffer zone to the core areas.

27. The first phase includes focused interventions in the Pinal de Amoles, Joya del Hielo, Cañada de las Avispas, Misión de Bucarelli and Ayutla core areas. These areas comprise 14,000 hectares of core zone and 170,000 hectares of buffer and influence zones (these buffer and influence zones incorporate bordering areas in the State of San Luis Potosi). The estimated population in these five areas is 68,500 inhabitants. Interventions will include planning, training, sustainable use demonstrations, definition of conservation set-aside modalities and awareness raising with the communities, ejidos and private landholders that occupy the territory of the project areas. In addition the project will develop crosscutting activities such as Reserve-wide awareness campaigns, strengthening of Reserve management, targeted studies and the installation of a monitoring and evaluation system. Phase 2 will expand and replicate the site-specific work to include all the nucleus zones and work with the communities, ejidos and private landholders located in the respective buffer and influence areas. The second phase will also permit the inclusion of relevant influence areas of the four surrounding states (including Hidalgo and Guanajuato). Thus at the end of the project the entire core zones and their immediate surrounding areas will have received diversified demonstrations of alternative land use options and their economic, social and biological sustainability.

OUTPUT 1: MANAGEMENT INFRASTRUCTURE FOR BIODIVERSITY CONSERVATION IN THE SIERRA GORDA BIOSPHERE RESERVE STRENGTHENED AND FUNCTIONING EFFECTIVELY (GEF: US\$237,800; NON-GEF: US\$ 750,010)

28. Full implementation of the ambitious Reserve management plan is constrained by poorly developed infrastructure facilities. Basic infrastructure including office facilities and equipment will be improved to strengthen the management capacities of the Federal Reserve Management Unit (FRMU) and the Sierra Gorda Ecological Group NGO (GESG). The project will also strengthen basic infrastructure necessary for enforcement/surveillance operations (ranger posts and more vehicles), critical monitoring and evaluation

capacities such as field monitoring bases and research facilities, upgraded computer hardware, modified GIS equipment, surveillance trails and remote sensing devices. Monitoring facilities will be located in accordance with biodiversity hot spots and critical conservation sites identified through output 2. Under the project, national funding will be used to build a monitoring centre and to install a hydro-climatologic monitoring system in key sites within the Reserve limits. This will vastly enhance the capacity of the FRMU and GESG to monitor and enforce improvement in biodiversity conditions in representative areas of the different ecosystems, and will very likely lead to the identification of new biodiversity elements in the region. Finally, the GESG public awareness and fund-raising office in Queretaro City will benefit from increased links (radio/telephone) to the Jalpan office in the Biosphere Reserve.

29. A demarcation and sign posting effort will be carried out with GEF financing to fully define the reserve limits and to effectively publicise the globally significant nucleus zones in the region. Global biodiversity criteria will also be incorporated in the demarcation and sign posting of eco-tourism trails and special sites of interest. Complementary financing will support sign posting efforts to discourage poaching, inappropriate waste storage and accumulation, and to express special watershed conservation and recuperation zones. The project will renovate and enlarge the environmental education facilities largely through co-financing, and will be used to impart training and awareness building activities for the entire region, as described in output 6.

30. Phase two will strengthen infrastructure for additional core areas , particularly field structures, equipment and facilities to enable management, research and monitoring activities. Basic infrastructure will then be provided in the entire Reserve and the identified buffer and transition zones in the greater, four-state landscape.

OUTPUT 2: POLICY, ECOLOGICAL AND SOCIO-ECONOMIC BASELINE ASSESSMENTS ARE UNDERTAKEN (GEF: US\$255,300; NON-GEF: US\$270,000)

31. The project will complete and systematise available information on socio-economic conditions, biological richness, land-use change patterns and the biophysical dynamics of key watersheds and land degradation. GEF financing will permit the undertaking of rapid assessments in the five core areas of phase one on current and potential land uses, status of key habitats, population dynamics of key flora and fauna species, potential for the establishment of biological corridors, and evaluation and ranking of identified influence zones. These baseline assessments are necessary for the adaptive management of the Reserve, and will be undertaken during the first phase of the project by an interdisciplinary team of experts.

32. Local funding will support the carrying out of focused studies on watersheds, water availability and quality in strategic parts of the Reserve. Co-financing will also be used to place special emphasis on economic evaluations of the Reserve's natural resources, including load capacities and extraction rates of species with high commercial potential, and on environmental services such as water generation and carbon storage. Targeted research to identify barriers and constraints on production and conservation will be carried out in key sites in the buffer zone. These evaluations will be complemented with GEF-financed social and cultural appraisals of traditional knowledge and techniques for conservation and sustainable use of natural resources, as well as of socio-economic dynamics in the region. Detailed information on productive activities, migration, and specific regional demographics and the relationship between private and social ownership of natural resources and their conservation state will be used for decision-making purposes.

33. Building upon successful past experiences, a number of the studies and evaluations will be carried out by specialised federal institutions (Technological Institute of Monterrey, National Autonomous University of Mexico, Del Valle University), state level institutions (University of Queretaro, State Science and Technology Council) and local entities. Additional assessments will be implemented directly by selected community-level individuals and/or organisations.

34. At the beginning of phase two, social, economic and biodiversity data will be updated to constitute a revised baseline, providing inputs for adaptive management of the second phase, and to more precisely measure project impact. Complementary focused studies will be undertaken in the balance of the Reserve core areas to expand the knowledge base and scope of the project. These include land-use dynamics, forested lands, potential uses and soil degradation evaluations, in addition to socio-economic studies and follow-up. Research findings from both phases will be compiled and published as part of the overall project dissemination efforts and to promote replication.

OUTPUT 3: IMPLEMENTATION OF ADAPTIVE AND PARTICIPATORY RESERVE PLANNING AND MANAGEMENT (GEF: US\$1,940,910, NON-GEF: US\$2,707,660)

35. The project will demonstrate a new model for decentralised protected areas management on the basis of a public-private partnership between the government and the GESG non-governmental partner. GEF resources will be initially used to strengthen the management capacity of both the government and GESG and will catalyse co-financing and additional resources for key activities that are currently under-funded or simply not carried out. The management team will be reinforced through the selective hiring of trained experts in conservation and sustainable use promotion and a comprehensive training package on conservation, ecology, land use enforcement, conflict resolution and sustainable livelihood alternatives will be implemented for Reserve management staff and GESG personnel.

36. The current tools for social participation within the overall management framework for the Reserve include the Technical Advisory Council (TAC) and community-level committees that co-ordinate local level efforts to promote conservation and sustainable natural resources use. Through GEF support, the TAC will progressively assume greater responsibilities during project implementation to transform itself into a local planning, executing and mainstreaming entity. Its operational environment and degree of participation will be expanded during phase two to include the entire four-state region. It will also benefit from increased co-funding for meetings, evaluation sub-committees, and missions to meet this goal. Intensive targeted training on environmental education, conflict resolution, legal framework, and basic administration will be provided for TAC members, with subsequent monitoring to ensure the quality of the training and to identify strategies for replication. In what will constitute a nation-wide first, the TAC will implement the Reserve management plan at a bio-regional level by developing a work programme and budget to promote inter-institutional co-operation. This gradual strengthening of the TAC over the life of the project is a key condition for the expansion of its mandate.

37. GEF resources will strengthen community-level organisations' capacities in productive practices, and monitoring and evaluation techniques in the first phase's five core areas. These organisations will participate in the preparation of pilot area development plans, monitor project implementation and impact and will provide feedback to the project steering committee and TAC. Ad-hoc co-ordination arrangements will be developed to link the community level committees with the TAC to broaden the latter's representation and constituency under phase two.

38. To facilitate adaptive project management, GEF resources will help establish a system for monitoring and evaluating socio-economic and biological trends. An existing geographic information system and database will be upscaled and linked to CONABIO's National System for Biodiversity Information (SNIB). The GIS will expand its scope to cover identified hotspots and other critical areas within the Reserve. Necessary modifications will be made to the GIS to ensure compatibility with the SNIB. As a necessary complementary action, workshops will be held to train communities on information collection techniques, building on CONABIO's experience in the preparation of the Biodiversity Country Study. This information will be used to update central monitoring systems, including the SNIB, and to adjust planned project interventions. It will also contribute to awareness building and training of local conservation committees that participate in the project. In conjunction, these efforts should lead to improved knowledge on globally relevant biodiversity in the various ecosystems represented in the Reserve and neighbouring areas.

39. Immediate high-priority conservation measures identified in the Management Plan will be implemented with GEF support in the initial 5 core areas, including standardisation of the land-use regime, aquifer protection, identification of rehabilitation zones, and consolidation of the biological integrity of the core areas. Micro-regional land-management programmes will be designed and implemented to help mitigate current threats posed by illegal logging, access roads, poaching, and forest fires. The project's second phase will provide continued support to scale up the conservation models to key communities, local NGO and conservation sites in the larger landscape comprised by four states (Guanajuato, Hidalgo, Queretaro and San Luis Potosi).

40. In collaboration with local communities, GEF support will be used to identify the appropriate location of natural regeneration areas and set-asides based on biological and socio-economic criteria. 500 hectares of forested areas per year is the initial goal for these set-asides to be established through remunerated contracts and intensified livestock and agricultural practices. GESG's current programme for land purchases and set-asides will be strengthened to include other conservation modalities, such as recreational areas, long-term conservancy add-ons, strict conservation sites, and biological corridors. Conservancies with private landowners will be negotiated when outright purchases of land-rights with local resources on rivers and creeks are not possible. Biological corridors will ensure appropriate and long-term conservation of the Reserve's gamma diversity, and will build on the outreach and environmental awareness programmes already promoted by the GESG. In the first phase of the project, 4 north-south biological corridors will be established within the Reserve limits, and will then expand to include two east-west corridors in the second phase providing the reserve with an integral strategic approach and coverage for conservation and rehabilitation activities.

41. A management plan to recover and stabilise the natural populations and habitats of endangered and endemic species will be designed and implemented through combined GEF support and co-financing, including the establishment of riparian biological corridors associated with the main surface waters of the Reserve and influence areas. The establishment of the riparian biological corridors will be linked with the environmental awareness programmes of GESG in the Reserve -such as garbage collection, management and recycling- to ensure the long-term integrity of the corridors.

42. National funding will be used to identify and demarcate high-priority zones as well as to develop watershed restoration programmes in two key areas initially (Pinal de Amoles and Arroyo Seco) to protect water storage and replenishment potential within the Reserve. Emphasis will be placed on selective reforestation efforts, soil-containment techniques (terraces, filtration dams) and the procurement of increased rainwater absorption and storage, in order to reduce sediment loads and increase water quality and availability in the region. Phase two activities will include the incorporation of fees for water-generation services with local, state and federal level beneficiaries, especially in the agricultural and hydraulic sector.

43. In support of public sector enforcement of land use regulations through voluntary community participation in 70 communities of the five core areas, GEF funds will promote land-use regularisation in key habitats during phase one. The project will build upon the significant advances made by PROFEPA to undertake audits of forest exploitation quotas, illegal hunting and illicit access routes, both through increased and legitimate community level enforcement management. Multi-media awareness campaigns will be intensified through radio broadcasting (most effective in rural areas), sign-posting and community meetings led by local rangers. During phase two, this process will be expanded to the entire Reserve and buffer and transition zones, through federal co-financing.

44. To prevent forest fires, high-risk areas that potentially imperil biodiversity hotspots will be identified and characterised with GEF support. A total of fourteen fire brigades in identified high-risk areas will be established and equipped, based on the mixed government/community emergency response model currently under development. This will complement the combined strategy of improved community awareness,

capacity building and identification of alternatives to slash-and-burn agriculture to be developed and implemented in the Reserve and its influence zones.

OUTPUT 4: FINANCIAL SUSTAINABILITY OF RESERVE MANAGEMENT IS ASSURED (GEF: US\$750,000, NON-GEF: US\$250,000)

45. Federal resources and private donations will continue to support the recurrent costs of Reserve operations. GEF resources will be used to finance incremental interventions in the Reserve as well as to permit the expansion of conservation, training and productive activities to the broader landscape scale.

46. Since inception, GESG has been providing technical assistance to communities and other NGO in the region on issues such as high-yield forestry plantations, environmental education, and sustainable livelihoods. This service has evolved from a *pro bono* response to local needs to a formal and remunerated programme within the GESG, with consulting fees currently being used to strengthen operational capacities of the organisation. With GEF funding, GESG will be strengthened through training on administrative and business practices, and a long-term financial sustainability plan will be prepared and executed with GEF support, using the existing Savings and Sustainability Fund (SSF) to capture new and additional funding sources. During project implementation, these resources will progressively increase to cover 100% of the incremental recurrent costs by the end of the project. The incremental recurrent costs have been estimated at 150,000 USD on an annual basis, and with a 10% return target this would translate into a 1.5 million fund requirement (possibly somewhat higher when contemplating moderate administrative costs, as an ad-hoc advisory council will be constituted to guide the operation and use of the fund).

47. To support GESG's expanded role as a service provider, a finance and administration council will be formed including certified business and financial experts. This council will support the expansion of the SSF instrument and role, and formal business strategies will be created for each of the activities described below. Specialised technical personnel will be hired as necessary to prepare management programs in the proposed activities together with community proponents. Revenue streams and business practices will be constantly monitored to provide inputs for adaptive management and to assess the progressive coverage of recurrent costs.

48. The SSF will secure deposits arising from a set of services provided by GESG and the FRMU to corporate, public, community and non-governmental clients. These services include, *inter alia*, imparting workshops for business organisation and co-ordination of smallholders in the context of high-yield forestry plantations, sustainable livelihood, entrepreneurial and marketing advice provided to local producers, and eco-tourism planning and operation. GESG will expand its role as a community broker to promote commercial forestry ventures between private parties and interested small holders, generating placement fees that will be deposited in the SSF. GESG and FRMU will participate as shareholder in these forestry ventures, receiving a percentage of the commercialisation proceeds upon plantation maturity. GESG will also increase its role in promoting and managing eco-tourism ventures through a fee-based technical assistance to interested communities. Expected income will be based on differentiated fees for promotional activity and actual management of eco-tourism services. Based on estimations and projections carried out by the GESG, the potential earnings for forestry services would be near US\$ 200,000, while eco-tourism would contribute US\$ 35,000 and other consulting services US\$ 20,000. Considering that these are initial projections it should be quite feasible to generate enough revenues so that by the end of project implementation, the SSF would reach the US\$ 1.5 million target.

49. During the second phase, in co-ordination with CONAPANP, and using needs analysis information generated under different projects, especially SINAP II, GESG and the FRMU will also provide training and technical assistance to other NGO, TACs and other NPA management units. Through agreement with CONAPANP, best practices in co-responsible biodiversity conservation activities will be documented and applied to other projects via provision of technical assistance and specialised training. The pilot income generating mechanism based on the provision of services is fully consistent with the 1995-2000 Protected

Areas Program and is expected to generate vital information on the financial sustainability of in-situ conservation. CONANP and CONAPANP have endorsed this approach as an integral part of the system-wide financial tools to be used in the SINAP for biodiversity conservation.

OUTPUT 5: BIODIVERSITY-FRIENDLY AND SUSTAINABLE ALTERNATIVE LIVELIHOOD OPTIONS ARE DEVELOPED AND DEMONSTRATED (GEF: US\$1,736,900 , NON-GEF: US\$6,754,100)

50. Through GEF support and mainly co-financing, the project will promote an enabling environment for alternative natural resource use within the Reserve and its influence zones through the demonstration of sustainable use options in the core areas chosen for phase one. Subsequently, it will facilitate the replication of successful experiences in the remaining priority areas, to be financed by federal and state productive programmes. The productive modules will be adapted to the needs of the three sub-zones identified in the Reserve management programme, and their respective use categories within the buffer and influence areas of the Reserve and surroundings.

51. In spite of its comparative economic advantage in the region, the forestry sector has so far been underdeveloped, with only 13,000 hectares of a potential of 122,000 hectares of pine oak forests, currently under some exploitation regime. GEF resources will permit the establishment of forestry management modules in accordance with the parameters indicated by the assessments on biodiversity hotspots, recuperation zones and key habit protection areas. These would include reforestation (with native species generated in locally managed nurseries) and forestation in recuperation zones. In several areas these new forestry activities will replace prior extensive ranching practices and other unsustainable activities, this will radically enhance the biodiversity and protect watershed areas of the reserve. Technical assistance will be provided to ensure the development of forestry community management plans considering the utilisation of both non-timber and timber products. Based on successful results, the second phase replication activities at the four-state level will be financed by SEMARNAT and other agencies, to guarantee the wider development of sustainable livelihood alternatives in the region.

52. Maximum impact in terms of revenue is expected from the establishment of demonstrative commercial plantations in 7,000 hectares with more than 4,000 smallholders, exclusively with native species, for the cellulose and timber market, based on the unique productive potential of the Reserve and an already tested business opportunity. GEF resources will be used to determine the most appropriate sites for these demonstrative plantations in degraded areas based on their protection and buffering function for key biodiversity habitats. A sustainable forestry strategy including training on industrial transformation of timber products and by-products will be integrated with co-financing support. Consensus-building, technical assistance and co-ordination with smallholders will be used to attract corporate financial investment and to develop mutually beneficial corporate-smallholders partnerships. The second phase of the project would replicate these activities on a larger scale, through co-financing. As detailed above, the fees generated by the provision of promotion, brokerage and technical assistance services to local smallholders are one of the main components of the financial sustainability plan of GESG.

53. To implement the forestry strategy, a mixture of GEF and co-financing resources would be used to develop the commercial potential of non-timber products such as damiana, spices, and nuts in semi-desert areas and orchids, bromeliads, fungi, medicinal and ornamental plants, forest fruits and butterflies, in temperate forest areas. Local funding will support demonstrative UMAs for highly valued species such as cycades and white-tailed deer. The second phase would capitalise on the research carried out under the first on a variety of species for expanded development and marketing efforts. Pilot experiences in agro-forestry will be implemented in reforested areas where the threat of understory destruction/perturbance can be clearly monitored and controlled. These will be backstopped by botanical studies and flora-specific technical assistance, and will be linked to commercialisation activities through product development and marketing support.

54. Forestry management regimes will be strengthened via reform of the regulatory framework and downstream market integration. Removal of regulatory constraints including inefficient agricultural and livestock incentives will be accomplished through GEF-financed technical studies and regulatory reform proposals complemented by advocacy actions at the state level. SEMARNAT has initiated dialogue with Agriculture and Social Development ministries to concentrate incentive reorientation in the Sierra Gorda Region. Incentives to shift the productive activity in the region towards the naturally competitive forestry sector will be provided through improved market access obtained via a multi-faceted strategy including reduction of intermediaries, establishment of direct points of sale, and increased value-added industrial transformation of timber products. Agreements are currently under negotiation with the forestry industry to support these pilot activities in Sierra Gorda.

55. The agricultural sector employs the majority of the economically active population in the four-state region. Current agricultural practices result in low output with a focus on self sufficiency and staple products such as corn and beans grown for the most part without irrigation (0.4-0.8 tons per hectare). A modest GEF investment will be used to develop demonstration plots on suitable soil, adaptive use of chemicals and improved soil fertilisation techniques, which will detonate a much larger investment of local, state and federal funds assigned to the agricultural sector. As a response to local necessities identified during project preparation, a demonstrative household vegetable gardening model will be established in pilot areas mostly for self-consumption. Higher value added agricultural practices will also be implemented, such as a seed production centre for commercial purposes. Household-scale fruit plantations with promising commercial potential and fruit processing plants will be established and promoted together with organic honey based on a domesticated bee originating from both the European and African bees (this bee is found widely in the region and also throughout the country), through re-orientation of agricultural subsidies that currently promote mono-cultivars and increased soil stress and deterioration. The development of productive gardening will also be encouraged alongside the commercialisation of the wild flowers and plants that support the expanded honey production. Taken as a whole, these efforts are specifically designed to reduce the pressure to expand the land under cultivation, and will compliment recuperation activities in key zones. In most cases the project will support studies that evaluate the production and commercial potential of promising fruits and vegetables, in addition to conservation and economic and social impact from both pilot and massive replication in the region. In phase two, massive expansion of this package of alternatives will be supported by and existing SAGAR and SEDESOL livelihood programs and enabled by market forces via comparative profitability.

56. In the livestock sector the main challenge will be to establish various load capacities of the different areas within the region, and to demonstrate intensive ranching practices and pasture solutions. A clear need for solutions to water scarcity, fodder production and improved genetic varieties suitable to local conditions has been identified during project preparation. Under the project, an integral approach will help diminish the total pasture area under use, reversing its deterioration and consequent threat to natural forested areas and their respective ecosystems with GEF funding. Local funding will evaluate the potential for fish farms and fish products with maximum replication potential. Lack of infrastructure, inefficient design and deficient organisation and proper funding have contributed to the limited success of fish farming in the region in the past. Interested private or local groups, through cost-sharing contracts with communities will implement demonstrative modules with trout in suitable areas without imposing any threat to the biodiversity of the area.

57. As an alternative and new economic activity, an eco-tourism plan for the region will be prepared and implemented during the project to increase and diversify community income while respecting and conserving globally important biodiversity elements. An extensive demarcation programme will be implemented with GEF support to induce low environmental impact and high-yield eco-tourism in the Reserve. This would include the identification of load capacities of globally diverse areas of the Reserve nucleus, buffer and influence zones. Community operators of Cuatro Palos, Bucarelli, Santa María de Cocos, San Juan de los Durán, Madroño Landa and Río Blanco, will be selected and properly trained. In co-ordination with communities and local authorities, the GESG will design special routes for cyclists, bird watchers and hikers, and identify special areas for environmental education purposes. Promotion activities will be designed to

optimize the number of potential tourists within the established limits, while specialized training courses for community service providers will mitigate undesirable trans-culturalization processes in participating communities. Private capital and state and municipal governments will finance investment requirements for full implementation of biodiversity-friendly eco-tourism.

58. As a means to provide an immediate, positive effect on the livelihood quality of the region, the project will work directly with the 150 communities located in or near the core areas and using exclusively co-financing, 2,800 ecological sanitation facilities will be installed, together with small-scale water treatment plants. Non-GEF resources will also finance a comprehensive waste management programme in core areas consisting of 100 recyclable materials stock centres, four landfill facilities designed and installed, and the relocation of two existing landfills, taking into account the information on aquifer recharge sites. A demonstration programme of installation and community management of rainwater reservoirs will be implemented in 30 pilot communities to be replicated with the collaboration of state and local authorities. In parallel, a water saving campaign will be carried out to optimise resource management for domestic and productive use.

OUTPUT 6: AN ENVIRONMENTAL EDUCATION AND PUBLIC AWARENESS CAMPAIGN IS UNDERTAKEN (GEF: US\$1,809,700, NON-GEF: US\$3,190,300)

59. Environmental knowledge and awareness demonstrated through natural resource management in the Reserve will result from dynamic promotion activities undertaken by GESG in collaboration with educational institutions and organisations within the Reserve, reaching an estimated regular audience of 17,000 students and 22,500 adults. Environmental education will be promoted both in informal local settings and in more formal conditions at all levels. An agreement between GESG and SEMARNAT's Centre for Sustainable Development Training and Education is currently under negotiation that will culminate with the establishment of a decentralised federal training program in Sierra Gorda. This program will serve as a platform for incremental GEF support to promote alternative approaches to communicate the importance of the environment, adjusted to the particular need of specific audiences in the greater SGBR region and forested regions of the country in general. Project co-financing and resources from international NGO and GESG will be used to train teachers, potential community environmental brokers, and will foster exchanges between all relevant stakeholders. The project will plan and implement 21 workshops for NGOs and more than 70 workshops for other relevant stakeholders in the region utilizing distinct approaches based upon the 12 years of experience that the GESG have accumulated in their work with environmental education in the area. A team of 20 community promoters will together with a professional team of 10 people be in charge of the detailed planning and implementation of the education campaigns and training that will include both traditional stakeholders in the Reserve area and relevant stakeholders from the wider four state region with impacts upon the biodiversity of the Reserve.

60. A comprehensive environment awareness campaign will be implemented in the Reserve. The communication strategy will involve the use of the most effective available media, such as radio, community theatre and murals. Marketing material ranging from videos to information brochures at the local, state, inter-state, national and international level will be produced and distributed to foster action, resource mobilisation, continued efforts and to improve the environmental and living conditions within the Reserve. At the local level the goal is to combine the local cultures found in the Reserve with alternative approaches to conservation and sustainable use. Systematic and methodological cataloguing of local conservation values and traditional knowledge will result in an enormous potential for replication in many other protected areas. The information generated under this output will strengthen CONABIO's database on traditional biodiversity management and use.

61. Phase two will allow for the extension of the awareness and environmental education activities – imparted by GESG- in a significant number of communities within the four-state region. This initiative, together with lessons learned from phase one, will enable conditions for a profound reform of proposed state educational investments and curricula in all four states in phase two. A full-scale experience-sharing

campaign has been undertaken by CONAPANP to disseminate the pilot co-management model experience, which will be gradually broadened to reach the entire SINAP during phases 1 and 2.

62. End of project situation: At the end of the project, there will be significant indications that the Sierra Gorda's globally significant biodiversity is being sustainably protected in its natural ecosystem. This will be ensured through the incorporation of biodiversity conservation principles and practices into existing and planned sustainable development interventions within the Reserve. The global community will benefit significantly from the protection of direct and indirect use values associated with biological diversity and forests, including increased carbon storage values, watershed protection and reduced land degradation. The operational capacity of GESG will be strengthened and the mainstreaming and coordination capacity of TAC demonstrated in buffer and influence areas of the four surrounding states. Biodiversity conservation decisions within the Reserve will be based upon sound information provided by a targeted research and monitoring programme. The Reserve will provide for an important repository of endangered Mexican flora and fauna. Degradation of priority habitat areas due to anthropogenic pressures and wildfires will be significantly diminished and active management of key wildlife species will be fully undertaken.

63. Buffer zone communities in the four states will be participatory stakeholders in Reserve management. In the buffer zone, pressure on biodiversity resources will be mitigated and biodiversity conservation will turn into a priority objective of local producers and community development efforts in general. Stakeholders, enabled by project-supported demonstrations, will substitute non-sustainable livelihoods with biodiversity-friendly alternative land uses. Given that the Sierra Gorda region is also a major water catchment area for nearby states, the project will benefit downstream communities by reducing off-site externalities from watershed mismanagement (i.e., the sedimentation of waterways, flooding from increased storm-flow, and fertilizer run-off). The proposed co-management model will have large potential application in other natural protected areas.

64. Eligibility for GEF financing: The Government of Mexico ratified the Convention on Biological Diversity on March 11, 1993. The Government also notified the GEF of its participation in the restructured GEF on 17 May 1994. The project is a model for implementing several guidelines provided by the CBD and addresses specifically some critical COP V decisions. In particular, the project addresses the issue of access and benefit sharing (Chapter 26), and incorporation of incentive measures that promote the development and implementation of social, economic and legal incentive measures for the conservation and sustainable use of biological diversity (Chapter 15). In addition the project considers strengthening capabilities to develop monitoring programmes and suitable indicators for biological diversity (Chapter 7), capacity development for education, public awareness and communication in biological diversity at the regional level (Chapter 17). The project also fulfils the objectives of the Convention on Biological Diversity by supporting in situ conservation (Article 18), ensuring the equitable distribution of benefits derived from biodiversity management (Articles 10, 16 and 18), monitoring (Article 7), awareness raising (Article 13), and institutional reinforcement (Article 12).

65. The project is fully consistent with the provisions of Operational Programme 3, Forest ecosystems, particularly with respect to the protection of a unique ecosystem containing old-growth forests and associated species. The project would also be eligible under OP 4, Mountain Ecosystems, in light of the special attention placed on globally relevant mountain ecosystems and their role in securing the greater Sierra Gorda region's water supply. In the context of Operational Programme OP 12, Integrated Ecosystem and Resource Management, beneficial impacts in carbon sequestration are expected as an outcome, considering that the project will determine and increase carbon storage capacities both in natural forests as well as managed forest systems. Land degradation is also considered relevant to the project, with conservation and rehabilitation efforts designed to protect remnants of the Sonoran Desert ecosystem, presently being destroyed by goats, agricultural expansion, etc.

66. GEF programmatic framework: The Government of Mexico is working with the GEF Secretariat and the Implementing Agencies to develop a 5-10 year Programmatic Framework for GEF support of biodiversity

conservation initiatives in Mexico. Negotiations are nearing completion, and strategic interventions have been identified that will form the basis of the framework to be presented to the GEF in late 2000. The Programmatic Framework for Mexico will consist of phased and sustained support for biodiversity conservation in accordance priorities outlined in the national Biodiversity Action Plan. Under the framework, the GEF will support interventions that enhance the body of knowledge and know-how on conservation approaches, expanding the range of available management tools. The framework specifically provides for the development of pilot conservation models in areas that demonstrate alternative and innovative management approaches. This project is one of the model projects featured in the Programmatic Framework, and in particular provides a vehicle for experimentation with public-private partnerships and decentralization of management that could expand the range of management instruments available.

67. Complementarity with other GEF Projects: GEF is supporting a number of conservation projects in Mexico that meet priorities outlined in the National Biodiversity Action Plan. These aim at enhancing know-how on different conservation approaches, and thus at increasing the range of available management tools while expanding conservation coverage to embrace a bio-geographically representative sample of landscapes. This project will provide a model for co-management of a protected area between a local NGO and the federal government, as a sustainable means to protecting biodiversity when productive alternatives are seriously embedded within local settings according to land use categorization and potential. As such the project seeks to formalize alternative management solutions to enable the Mexican Government to identify respective comparative advantages of institutions involved in conservation work within protected areas, and formulate a wider mix of solutions adapted to the distinct conditions found throughout Mexico so as to improve the total conservation result. The project will use the existing institutional mechanisms for exchange of experiences within the SINAP system, to guarantee synergies with other GEF projects under implementation and the rest of the SINAP reserves. It will present advances and best practices at the Reserve Directors meetings held 3 times a year to exchange experiences, document best practices and long term strategies for the development and financing of Reserve activities. It will make presentations at the quarterly CONANP meetings and to the special CONAPANP committee on protected area finance. Finally the project steering committee will organize meetings with its counterpart in the SINAP 2 project. The project directly complements other approved and proposed GEF interventions that will: 1) improve management of protected areas (WB-GEF Consolidation of Protected Areas Project); 2) invest in the creation of a biological corridor (WB-GEF, Mesoamerican Biological Corridor); 3) integrate conservation objectives and strategies into management frameworks for indigenous reserves (WB-GEF Indigenous and Community Conservation Project); and 4) establish a bioregional management model of ecosystems, aiming to integrate biodiversity objectives into sectorial development programs (UNDP-GEF: Integrated ecosystem management in three priority ecoregions). The project has been developed following close consultation with the other GEF Implementing Agencies through the in-country Inter-agency GEF Coordination Committee and the National GEF Project Coordination Committee.

68. Link to UNDP CCF: UNDP's Country Cooperation Framework (CCF) for Mexico supports interventions that combine natural resource use with environmental protection measures. UNDP is assisting the Government of Mexico to meet its international commitments under the Environmental Conventions through leveraging funding and supplying technical assistance. The UNDP office in Mexico also supports the Government of Mexico's efforts to engineer the active participation of civil society in the design, execution, and evaluation of environmental programmes. This project incorporates both the aforementioned support elements, and UNDP will play a key role in brokering covenant between stakeholders, and ensuring that institutional covenants are honoured.

3.2 LOGICAL FRAMEWORK MATRIX

Project strategy	Objectively verifiable indicator	Means of verification	Assumptions
Development objective: Globally significant biological diversity will be conserved and utilized in a sustainable fashion by stakeholders			
Immediate objective 1: Reserve's management capacities strengthened in order to sustain efforts for the conservation and sustainable use of its globally significant biodiversity over the long term	Biological diversity in the RBSG conserved in terms of population dynamics of key and endemic species and key habitats, increasing indication of ecosystem health through increasing numbers of indicator species Co-management paradigm fully operationalized by year 4 (phase 1) and further strengthened for sustainability and demonstrated by year 7 (phase 2)	Species and habitats surveys Project progress reports	Species are able to recover and flourish in restored and newly protected/managed areas Government of Mexico maintains economical and political stability Timely disbursement of co-financial commitments
Output 1: Reserve management infrastructure is strengthened	A biodiversity monitoring centre in operation from year 2 in Jalpan de la Sierra Surveillance routes established in critical areas by the end of year 3 Biodiversity interpretation facilities installed and in operation by year 2 within the GESG An environmental education centre established by the end of year 2 in Jalpan de la Sierra The Reserve's boundaries completely demarcated by the end of year 4 and an appropriate signage and posting established	Field visits, construction progress reports Field visits and project progress report Field visits and project progress reports Engineer final reports and fields visits Field visits and project reports	The state government of Queretaro continues supporting this initiative Communities collaborate consistently in the definition and maintenance of routes Local communities contribute to maintenance Local government support can be maintained Communities reach consensus on actual demarcation and collaborate to its maintenance

<p>Output 2: Policy, ecological and socio-economic baseline assessments are undertaken</p>	<p>Baseline geo-environmental, biological and socio-economic surveys completed and utilized in first phase core areas by year 2</p> <p>Focused studies on sub-watersheds, current and potential land-uses, economic valuation of natural resources by the end of year 4</p> <p>Focused studies on status of habitats, key flora and fauna population dynamics, species endemism, endangerment, biological corridor potential, and influence appraisals by the end of year 4</p> <p>Focused studies on socio-economic dynamics and traditional knowledge for the conservation and sustainable use of natural resources by the end of year 2</p>	<p>Project plans and project reports</p> <p>Technical reports and databases; project evaluations, and progress reports</p> <p>Habitat maps of critical areas, database, technical reports, project progress reports</p> <p>Technical reports, project progress reports</p>	<p>Communities support and collaborate with the project and government support and collaborate with local communities</p> <p>Experts are available on time to undertake studies</p> <p>Experts are available on time to undertake studies</p> <p>Universities and research institutions share data and co-ordinate on research activities</p>
<p>Output 3: Implementation of adaptive and participatory Reserve planning and management</p>	<p>Co-management arrangements (FRMU and GESG) improved and under implementation by the end of year 1</p> <p>TAC formally invested with technical co-ordination and regional planning functions by the end of year 1, and consolidated by involving the governments of the state of San Luis Potosi and Queretaro in the first year, and Guanajuato and Hidalgo by the end of year 4</p> <p>TAC and community level management committees obtain sectoral policy mainstreaming in transition zones and buffer zones of first phase core areas, as well as add-on co-financing for conservation activities by the end of year 4</p>	<p>Signed MoU; project technical progress reports; project evaluations</p> <p>TAC meeting minutes, MoU</p> <p>Annual operational plans and budgets; deposit notes, project technical progress reports</p>	<p>SEMARNAT continues supporting the project approach</p> <p>Local and Federal authorities remain committed to the biodiversity conservation of the Reserve and the state governments of San Luis Potosi, Guanajuato and Hidalgo accept direct participation</p> <p>Local and Federal authorities remain committed to biodiversity conservation</p>

Output 3 (cont.)	The governments of Guanajuato and Hidalgo involved in site-specific replication activities by the end of the year 5	State government budgets	Governments of Guanajuato and Hidalgo are consistently committed with biodiversity-friendly activities
	Five site-specific development plans developed to be revised on a yearly basis by the end of year 4	Development plans, project evaluations, and progress reports	Communities collaborate and appropriate development
	Management information systems (database and GIS) strengthened and in operation by the end of year 2	Information system in place	There are no major changes in the support of the government of Queretaro to the GIS
	Geo-environmental, biological and socio-economic monitoring system established and utilized for adaptive management by the end of year 3	PA monitoring scorecard	Communities' experts and academicians share data and coordinate on monitoring activities
	Annual monitoring and evaluation exercises completed, demonstrating production and timely delivery of results, including water services and carbon storage by the end of the project	Monitoring and evaluation reports, Technical progress reports	Local communities share information
	Land use environmental impact appraisals completed by the end of the project	Technical reports	Certified environmental impact consulting firms are available on time to undertake studies
	Key core areas and corridors for biodiversity conservation identified and mapped by the end of year 1	PA zoning maps	Communities and landholders are able to reach consensus on zoning
	Four north-south biological corridors under basic conservation activities by the end of year 4	Monitoring reports	Local communities actively collaborate with biological conservation
Participatory civil surveillance conservation brigades established in 70 communities pertaining to 5 identified key first phase core areas, by the end of year 4	Signed MoUs	Communities remain committed to biodiversity protection	

<p>Output 3 (cont.)</p>	<p>Key watershed areas (<i>Pinal de Amoles and Arroyo Seco</i>) protected and rehabilitated by the end of year 4</p> <p>Conservation management plans for endemic and charismatic species under full implementation by the end of year 4</p> <p>10 volunteer fire prevention corps and 4 fire control brigades established and trained in high-risk areas by the end of year 4</p> <p>Conservation set-asides defined and established with adequate management and infrastructure</p> <p>1,000 hectares of old forest within the Reserve under carbon sequestration programmes by the end of year 4</p> <p>500 hectares per year in key zones rehabilitated by the end of year 4</p> <p>1,000 hectares under natural regeneration programme by the end of year 2</p>	<p>Monitoring reports and sampling surveys</p> <p>Plans; Progress reports</p> <p>Theory and practical knowledge survey after training; fire drills conducted regularly</p> <p>Progress reports</p> <p>Signed MoUs; monitoring reports</p> <p>Plans and progress reports</p> <p>Signed MoUs</p>	<p>Local population are receptive to endorse protection activities and to undertake rehabilitation activities Trust between GESG and stakeholders can be maintained</p> <p>Local populations are receptive for brigade's recruitment</p> <p>Consensus of landholders can be reached</p> <p>Consensus of small property owners can be reached</p> <p>Wildfires are contained</p> <p>Consensus of small property owners can be reached</p>
<p>Output 4: Financial sustainability of Reserve management is assured</p>	<p>10% of incremental recurrent costs are financed by the Saving and Sustainability Fund by the end of year 1; 25% by the end of year 2; 50% by the end of year 3; 80% by the end of year 4; and 100% by the end of year 5.</p> <p>US\$100,000 generated through community brokerage services provided to private enterprises interested in establishing commercial, high-yield forestry plantations in partnership with local small holders.</p>	<p>Monthly billing of service provided</p> <p>Saving and Sustainability Fund account statements</p> <p>Business plans and financial statements for the provision of brokerage services</p>	<p>The government continues supporting tax deductions for NGOs; SSF operates under healthy market conditions</p> <p>Very conservative forecasts for revenue related to service provisions are met</p>

<p>Output 4 (cont.)</p>	<p>US\$ 100,000 income obtained for SSF from year 7 onwards, derived from profit sharing of forest plantations</p> <p>US\$ 120,000 income by the end of the project, generated through provision of training services for community eco-tourism provided starting in year 2</p> <p>US\$ 70,000 income generated by eco-tourism promotion and operation provided to participating communities, starting in year 2.</p> <p>US\$ 14 million and first tranche of GEF funds disbursed by the end of year 4.</p> <p>Final US\$ 9 million disbursed by the end of the project</p>	<p>Bills of sale for plantation products/harvest and financial statements</p> <p>Business plans and financial statements for the provision of brokerage services</p> <p>Business plans and financial statements for the provision of brokerage services</p> <p>Deposit notes / financial reports</p> <p>Deposit notes / financial reports</p>	<p>Wildfires are contained</p> <p>Very conservative forecasts for revenue related to service provisions are met</p> <p>Positive balance of international eco-tourism market continues</p> <p>Adequate supply of local goods and services maintain leakage to a minimum</p> <p>Timely disbursements of financial commitments from private sector sources</p> <p>Timely disbursements of financial commitments from private sector sources</p>
<p>Immediate Objective 2: Increased value of biodiversity conservation and sustainable use</p>	<p>Biodiversity conservation of globally significant core areas and biodiversity-friendly and sustainable use on a sustainable footing by the end of the project</p>	<p>GIS map of land use change</p>	<p>Communities are receptive to actual financial advantages of alternative land use practices</p>
<p>Output 5: Biodiversity-friendly and sustainable alternative livelihood options are developed and demonstrated in buffer zones and areas of influence</p>	<p>Updated sustainable development oriented government livelihood programmes by the end of the project</p>	<p>Programme descriptions, TAC meeting minutes</p>	<p>Local and federal authorities are receptive to change their policies services</p>

<p>Output 5 (cont.)</p>	<p>4,000 smallholders developing high-yield biodiversity-friendly forestry plantations in partnership with corporations in degraded areas (7,000 hectares)</p> <p>A long term sustainable management plan developed by 7 communities (<i>Cuatro Palos, Sta. María de Cocos, San Juan de los Durán, Madroño Landa, Lagunita de San Diego, Rio Blanco and Bucarelli</i>) and on a sustainable trajectory by the end of year 4</p> <p>A field guide and 2 routes for bird-watchers established by the end of the year 2</p> <p>2 biodiversity-friendly bicycling routes identified and demarcated in collaboration with local authorities by the end of year 2</p> <p>8 eco-tourism routes demarcated with facilities for environmental awareness building and interpretation by the end of year 1</p> <p>Positive impact of eco-tourism on biodiversity through increasing number of indicators species</p> <p>2 pilot projects for biodiversity-friendly livestock management demonstrated by the end of year 3.</p> <p>Community management and 2 sustainable exploitation pilot projects established for the commercialization of fish products</p>	<p>Pre-feasibility studies, signed contracts, financial statements</p> <p>Comprehensive visitor lists per year and financial statements</p> <p>Maps, yearly visitor lists per route</p> <p>Monitoring studies, maps and yearly visitor lists per route</p> <p>Monitoring studies, maps and yearly visitor lists per route</p> <p>Monitoring biodiversity studies, evaluations</p> <p>Initial pre-feasibility assessments, marketing studies and plans, signed MoA, and financial statements</p> <p>Initial pre-feasibility assessments, marketing studies and plans, signed MoA, and financial statements</p>	<p>Private interest and/or local groups of interested backed by their respective communities</p> <p>Support and participation of local authorities and communities can be maintained</p> <p>Protection of avian ecosystem through this project is sufficient to maintain bird population.</p> <p>The local communities collaborate by maintaining routes and providing eco-tourism services</p> <p>The local communities collaborate by maintaining routes and providing eco-tourism services</p> <p>No eco-tourism related, uncontrollable accidents occur.</p> <p>State government maintain their support to alternative productive schemes</p> <p>Legal context supports productive shift to sustainable practices</p>
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Output 5 (cont.)	2 pilot projects for the commercialization of biodiversity-friendly non-timber products like <i>damiana</i> , <i>oregano</i> , <i>pine nut</i> and <i>laurel</i> demonstrated by the end of year 4	Initial pre-feasibility assessments, marketing studies and plans, signed MoA, and financial statements	The market favours the commercialization of green products.
	1 pilot project for the sustainable commercialization of biodiversity-friendly <i>cycades</i> demonstrated for the Queretaro market by the end of year 4	Initial pre-feasibility assessments, marketing studies and plans, signed MoA, and financial statements	The Queretaro market place responds favourably to the introduction of <i>cycades</i>
	1 pilot project for the sustainable commercial management projects of <i>white tailed deer</i> established for the national market by the end of year 3	Initial pre-feasibility assessments and project progress reports	Legal context supports productive shift to sustainable practices
	350 household vegetable gardens established and developed by the end of the year 4 (non-GEF)	Project progress reports	Local population are willing to participate in home-gardening
	A candle-manufacturing workshop and a ceramic handicraft workshop established by the end of year 4 (non-GEF) and 1 dehydrated fruit workshop and 2 carpentry workshops	Initial pre-feasibility assessments, marketing studies and plans and financial statements	The market favours commercialization of candles and ceramics
	25,000 fruit trees for commercial purposes planted and 3 fruit processing plants operating and marketing facilities and accessories in main market places by the end of year 4 (non-GEF)	Field visits, project report	Local populations collaborate and market trends favour commercialization of fruits
	An ornamental bird production centre (<i>re. agapornis, ninfa, cabrita, canárica, codorniz and perdiz</i>) established for commercial purposes by the end of year 2	Initial pre-feasibility assessments, marketing studies and plans and financial statements	The market favours commercialization of ornamental birds
6 timber products management centres established and processing enterprises by the end of the project (mostly non-GEF)	Initial pre-feasibility assessments, marketing studies and plans, signed MoA, and financial statements	The market favours commercialization of certified timber products	

<p>Output 5 (cont.)</p>	<p><i>A pino gregui</i> seeds and ornamental plants seeds producing centre (re. <i>Helichisum bracteatum</i>, <i>limonium sinuatum</i>, <i>achillea filipendulina</i>, <i>achillea millefolium</i>, <i>xerantemun annuum</i>, <i>lunaria annua</i> and <i>physalis</i>) established by the end of year 4.</p> <p>4 municipal dumps installed within the reserve and 2 others relocated by the end of the year 3</p>	<p>Initial pre-feasibility assessments, marketing studies and plans and financial statements</p> <p>Progress reports</p>	<p>The seed market trends are favourable to sustained expansion of seed sales</p> <p>Consensus of local communities can be reached</p>
<p>Output 6: An environmental education and public awareness campaign is undertaken</p>	<p>Regional awareness campaign designed and approved by the end of year 2</p> <p>Level of environmental awareness in government officials and the general public meets campaign goals by the end of the project</p> <p>Project team capable to transfer conservation awareness to local communities by the end of year 1</p> <p>17, 000 students receive an environmental education program imparted by the GESG in 150 communities within the reserve by the end of the first phase and 34,000 students by the end of the project</p> <p>Environmental brokers capable to transfer conservation awareness to local communities</p> <p>Annual fora, workshops, seminars, conference and exchanges promoting RBSG held</p> <p>5 workshops for other national NGOs held per year to enable effective replication in other NPAs</p>	<p>Approved campaign plans</p> <p>Sociometric surveys</p> <p>Knowledge surveys after training</p> <p>Environmental education work plan scorecards</p> <p>Knowledge surveys after training</p> <p>Project progress reports</p> <p>Project progress reports</p>	<p>Continuity in local leadership provides a locus for learning and awareness</p> <p>Audience is receptive to conservation awareness</p> <p>The local communities are perceptive to conservation awareness</p> <p>Education's institutions willing to collaborate with project awareness initiatives</p> <p>Local communities are receptive to conservation awareness</p> <p>Audience receptive to organized awareness forums</p> <p>NGOs maintain their willingness to participate in workshops</p>

3.3 PROJECT ACTIVITIES

<i>Phase I activities (Year 1-4)</i>	<i>Phase II activities (Year 5-7)</i>
OUTPUT 1: Reserve management infrastructure is strengthened	
1.1 Infrastructure	
Activity 1.1.1: Establish and provide equipment for a biodiversity monitoring centre Activity 1.1.2: Establish surveillance routes in critical zones of the Reserve and other surveillance facilities Activity 1.1.3: Design and build environmental interpretation facilities Activity 1.1.4: Install a hydro-climatologic monitoring system Activity 1.1.5: Building and maintaining a training centre Activity 1.1.6: Establish improved office facilities and equipment and new field structures Activity 1.1.7: Complete and reinforce the demarcation of Reserve boundaries and signage and posting of the Biosphere Reserve	Activity 1.1.8: Strengthen infrastructure requirements for phase two core areas, particularly the field structures, equipment and facilities to enable management, research and monitoring in the whole Reserve and in buffer and transition zones of the four surrounding states
OUTPUT 2: Policy, ecological and socio-economic baseline assessments are undertaken	
2.1 Baseline assessments	
Activity 2.1.1: Diagnose and gather existent relevant research on the reserve natural resources status and dynamics Activity 2.1.2: Update comprehensive baseline on biodiversity and establish a monitoring system on recuperation, conservation and change in land use Activity 2.1.3: Targeted research <ol style="list-style-type: none"> a) Identify and map land use potential and patterns b) Assess and monitor key watershed quantitative and qualitative status and functions c) Status and monitoring of key habitats d) Endemic, endangered and charismatic species population dynamics e) Vascular plant inventories Activity 2.1.4: Identify and monitor influence activities and dynamics in core areas Activity 2.1.5: Undertake social assessment of pilot area communities through qualitative and quantitative sampling techniques	Activity 2.1.6: Monitor and evaluate social and economic change in the pilot areas Activity 2.1.7: Refine targeted research to focus on production and conservation constraints Activity 2.1.8: Undertake an economic valuation of natural resources and environmental services, including water services and carbon storage Activity 2.1.9: Publish research findings and project results and distribute outside pilot areas
OUTPUT 3: Implementation of adaptive and participatory Reserve planning and management	
3.1 Project establishment	
Activity 3.1.1: Establish and orient project personnel <ol style="list-style-type: none"> a) Select and recruit project staff b) Establish Steering Committee c) Train and familiarize project staff with project log frame and expected results 	Activity 3.1.2 Undertake a thorough institutional evaluation Activity 3.1.3 Adapt project strategy and management accordingly <ol style="list-style-type: none"> a) Determine outreach points for replication work in the other two surrounding states (Guanajuato and Hidalgo) b) Evaluate staff capabilities for phase II c) Revise TORs and reinforce staff structure for phase II d) Establish new field offices in other sites

3.2 Training /Technical assistance	
<p>Activity 3.2.1: Develop and implement a training/ technical assistance plan</p> <ul style="list-style-type: none"> a) Train expanded project team in political negotiation and conflict resolution b) Targeted training of professional staff in business and environmental strategic planning and management c) Train project team members in project management, strategic planning, negotiation techniques and environmental management d) Targeted training in environmental law and land tenure conflict resolution e) Targeted training in community development and consensus building techniques 	<p>Activity 3.2.2: Continue training as necessary to develop management, negotiation and conflict resolution capacities</p> <p>Activity 3.2.3: Develop and implement plans for training of local capacities (beyond initial pilot site communities)</p> <p>Activity 3.2.4: Train/ re-engineer project staff, for phase II</p>
3.3 Institutional strengthening, inter-institutional co-ordination and mainstreaming	
<p>Activity 3.3.1: Strengthen the Technical Advisory Committee (TAC) to transform it into a regional planning and Co-ordination Committee</p> <ul style="list-style-type: none"> a) Implement the Reserve's Management Plan at the bioregional level promoting mainstreaming in the four surrounding states b) Develop and monitor an annual operational plan and budget for inter-institutional co-operation among TAC members, promoting institutional support and re-channeling of monetary funds c) Establishment of evaluation sub-committees d) Technical field visits within the region and immediate surrounding areas <p>Activity 3.3.2: Expand TAC participation by involving the government of San Luis Potosi and the municipality of San Joaquin in the first year</p> <p>Activity 3.3.3.:Design an undertake a campaign in support of the TAC to build conservation awareness among public servants and technical advisors to enable re-orientation of public policies and redefinition of public works in the four surrounding states</p> <p>Activity 3.3.4: Form and strengthen community level committees to implement and monitor conservation and sustainable use initiatives in all pilot areas</p> <ul style="list-style-type: none"> a) Develop and monitor 5 site-specific development plans to be revised in a yearly basis b) Execute capacity development plans for target communities in 5 pilot areas 	<p>Activity 3.3.5: Evaluate and reinforce mainstreaming mechanisms and expand their focus to two other states (<i>Guanajuato</i> and <i>Hidalgo</i>) to attain integral coverage of influencing activities and policies</p> <p>Activity 3.3.6: Expand TAC focus and participation by involve the state governments of Guanajuato and Hidalgo in the 4th year in site-specific replication activities</p> <p>Activity 3.3.7: Form and strengthen community level committees and grassroots organizations beyond pilot sites in the four surrounding states</p> <p>Activity 3.3.8: Co-ordinate second-tier actions, re. watershed management and water services with the government of San Luis Potosi and CNA, carbon sequestration and carbon bond market development with the Office of Climate Change at INE</p> <p>Activity 3.3.9: Support INE to disseminate and replicate TAC functioning as a co-ordination and mainstreaming committee</p>

3.4 Conservation and rehabilitation	
<p>Activity 3.4.1: Protect and rehabilitate key watershed areas at <i>Pinal de Amoles</i> and <i>Arroyo Seco</i></p> <p>Activity 3.4.2: Undertake basic conservation and biodiversity protection activities in 5 identified key core areas (<i>Pinal de Amoles, Joya del Hielo, Cañada de las Avispas, Misión de Bucarelli</i> and <i>Ayutla</i>) involving two of the four surrounding states (<i>Queretaro</i> and <i>San Luis Potosi</i>)</p> <ol style="list-style-type: none"> Promote land use regularization and enforcement Establish voluntary participation and community participatory civil surveillance conservation brigades in 70 communities Establish biodiversity conservation control facilities Support PROFEPA officers to undertake mandatory audits of forest exploitation quotas, illegal hunting, provoked fires and illicit route opening Control and support enforcement of regulations on slash and burn agricultural practices Follow up legal prosecutions to guarantee dissuasive enforcement <p>Activity 3.4.3: Protect the 4 identified north-south biological corridors</p> <p>Activity 3.4.4: Rent or purchase critical areas to guarantee strict conservation</p> <p>Activity 3.4.5: Establish a carbon storage pilot project in 1,000 hectares of old forests</p> <p>Activity 3.4.6: Establish natural regeneration areas in selected sites covering 2,000 hectares</p> <p>Activity 3.4.7: Rehabilitate 500 hectares in key zones every year</p> <p>Activity 3.4.8: Disease control and combat</p> <p>Activity 3.4.9: Establish agreements to guarantee water availability for flora and fauna</p> <p>Activity 3.4.10: Promote the definition and enforcement of urban management, building norms and regulations safeguarding scenic integrity within the Reserve</p> <p>Activity 3.4.11: Implement a home-based demonstrative energy efficiency programme and promote the setting up of 600 efficient wood-burning heaters</p> <p>Activity 3.4.12: Develop and apply pilot recuperation schemes for environmental services</p> <p>Activity 3.4.13: Develop integrated ecosystem management models that conserve biodiversity and sequester carbon in selected areas</p>	<p>Activity 3.4.14: Review biodiversity conservation plans in accordance with forest fragmentation and status information, community committee's management information, experience and acceptance</p> <p>Activity 3.4.15: Expand the conservation and biodiversity protection activities to the whole reserve territory considering influence activities of the four surrounding states (<i>Guanajuato, Hidalgo, Queretaro</i> and <i>San Luis Potosi</i>)</p> <p>Activity 3.4.16: Protect the two left east-west biological corridors providing the Reserve with integral coverage in conservation and rehabilitation activities</p> <p>Activity 3.4.17: Establish natural regeneration areas in additional sites, incorporating 1,500 hectares</p>
3.5 Wild fire prevention and control	
<p>Activity 3.5.1: Establish equipment and facilities to prevent and control wildfires in high-risk areas</p> <p>Activity 3.5.2: Support law enforcement to prevent utilization of fire as an agricultural tool.</p> <p>Activity 3.5.3: Prevent and combat wildfires through awareness-building activities</p> <p>Activity 3.5.4: Establishment of fire-resistant breaches to protect nucleus zones</p> <p>Activity 3.5.5: Establish, train and create an effective incentive scheme to 10 volunteer fire prevention corps and 4 fire control brigades in high risk areas</p>	<p>Activity 3.5.6: Establish an awareness campaign to prevent fire usage in key communities of the four surrounding states</p> <p>Activity 3.5.7: Expand fire control and prevention assets to the states of <i>Guanajuato</i> and <i>Hidalgo</i> and to the northern border of the Reserve with the state of <i>San Luis Potosi</i></p>
3.6 Monitoring and evaluation	
<p>Activity 3.6.1: Define and establish the reserve boundaries and zoning</p> <p>Activity 3.6.2: Update and strengthen a multifaceted database and a geographic information</p>	<p>Activity 3.6.7: Update the biological, ecological, social and economic databases to monitor project conservation patterns and impact</p>

<p>system (GIS) at the site level to inform management decisions and a regular monitoring programme based on information management</p> <p>Activity 3.6.3: Co-ordinate with CONABIO to acquire and update information generated by the national GIS and the national system of biodiversity information</p> <p>Activity 3.6.4: Develop and implement a monitoring system on community participation, community empowerment and life quality improvement</p> <p>Activity 3.6.5: Synthesise environmental and socio-economic information for decision making and diffusion purposes</p> <p>Activity 3.6.6: Elaborate a progress report towards sustainability at the end of year 4</p>	<p>Activity 3.6.8: Continue acquiring and updating information to GIS and ensuring linkage with CONABIO's biodiversity monitoring and evaluation system (SNIB)</p>
<p>OUTPUT 4: Financial sustainability of Reserve management is assured</p>	
<p>4.1 Strengthening of saving and sustainability fund</p>	
<p>Activity 4.1.1: Designate and constitute a business and finance advisory committee to outlook and support business management of service packages offered by GESG and FRMU</p> <p>Activity 4.1.2: Strengthen GESG and FRMU business capacities through assignment of business experts and consultants per line of service</p> <p>Activity 4.1.3: Develop business strategy for community brokerage, producers co-ordination and technical assistance designed to link private enterprises with small holders in high yield forestry plantations in degraded areas, negotiating profit sharing contracts for plantation yield and finished products resulting from this yield (this relates to the activity 5.1.2)</p> <p>Activity 4.1.4: Develop business strategy for the provision of technical assistance and marketing services provided to local producers (this relates to bundles of activities 5.1, 5.2 and 5.4)</p> <p>Activity 4.1.5: Develop business strategy for community-based eco-tourism, including design, operation and promotion services (this relates to bundle of activities 5.3)</p>	<p>Activity 4.1.6: Assess business results and progressive coverage of incremental recurrent costs to adapt strategy and widen the range of services provided</p> <p>Activity 4.1.7: Provide technical assistance and training in the context of replication of co-management best practices, and TAC enhanced functioning (this relates to services provided as part of the activity 6.1.3)</p>
<p>OUTPUT 5: Biodiversity-friendly and sustainable alternative livelihood options are developed and demonstrated in buffer zones and areas of influence</p>	
<p>5.1 Sustainable forestry management</p>	
<p>Activity 5.1.1: Promote community participation in the definition and development of alternative forestry uses to ensure community ownership in the 5 defined pilot areas</p> <p>Activity 5.1.2: Develop strategic partnerships between more than 4,000 local smallholders and corporations to develop high-yield commercial plantations exclusively with native species for the <i>cellulose</i> and <i>wood</i> market (7.000 hectares) capitalizing on the unique productive capacity of the reserve and an already tested business opportunity</p> <p>Activity 5.1.3: Provide technical advice on forestry management to landholders in pilot areas</p> <p>Activity 5.1.4: Promote the creation and business consolidation of associations and strategic partnerships among forest smallholders through brokerage and conflict resolution methods</p> <p>Activity 5.1.5: Develop demonstrative initiatives of processing and commercialization of timber sub-products in top timber producing areas</p> <p>Activity 5.1.6: Establish 1 pilot sustainable commercial management project of highly valued <i>cycades</i>, for the national market</p>	<p>Activity 5.1.12: Evaluate profitability of alternative uses and market opportunities to refine and adapt strategy</p> <p>Activity 5.1.13: Expand high-yield commercial plantations to a minimum of 7,000 hectares involving additional 3.000 smallholders</p> <p>Activity 5.1.14: Promote replication at the site level beyond the pilot areas based on best business and environmental practices</p> <p>Activity 5.1.15: Promote market expansion of phase I successful products</p> <p>Activity 5.1.16: Promote expansion of successful experiences in the four states via market forces and other agencies, especially SAGAR and SEDESOL, aside from SEMARNAT</p>

<p>Activity 5.1.7: Establish 1 pilot sustainable commercial management project of <i>white-tailed deer</i> for the national market</p> <p>Activity 5.1.8: Develop demonstrative commercial sustainable management of non-timber products like <i>damiana</i>, <i>oregano</i>, <i>pine-nut</i>, and <i>bay leaf</i> in semi-desert pilot areas</p> <p>Activity 5.1.9: Develop analogue forestry plantations, re: <i>palms</i>, <i>mushrooms</i>, <i>medicinal plants</i>, <i>forest fruits</i> and <i>butterflies</i> in temperate forest pilot areas</p> <p>Activity 5.1.10: Promote with federal and local governments, a reform of the regulatory framework and provide incentives to undertake domestic forestry management</p> <p>Activity 5.1.11: Develop downstream market integration of aforementioned forestry products through marketing research, planning and diversified commercialization</p>	
<p>5.2 Other alternative and sustainable productive land uses</p>	
<p>Activity 5.2.1: Develop and market <i>pino greguii</i> seeds and ornamental plants seeds, re. <i>helichisum bracteatum</i>, <i>limonium sinuatum</i>, <i>achillea filipendulina</i>, <i>achillea millefolium</i>, <i>xerantemun annuum</i>, <i>lunaria annua</i> and <i>physalis</i></p> <p>Activity 5.2.2: Demonstrate intensive ranching practices in key communities, so as to protect key habitats and endemic species, re. <i>Cactaceae</i></p> <p>Activity 5.2.3: Establish 2 pilot fish farms in communities with maximum replication potential</p> <p>Activity 5.2.4: Establish an ornamental bird's production centre for commercial purposes, re. <i>agapornis</i>, <i>ninfa</i>, <i>cabrita</i>, <i>canárica (canary)</i>, <i>codorniz (quail)</i> and <i>perdiz (pheasant)</i></p>	<p>Activity 5.2.5: Evaluate financial performance of newly established enterprises to adapt replication strategy</p> <p>Activity 5.2.6: Plant 15,000 fruit trees for commercial purposes outside pilot areas and promote massive replication financed by other agencies, especially SAGAR and SEDESOL and by market forces</p> <p>Activity 5.2.7: Promote replication of well performing productive experiences in influence areas of the four surrounding states with the collaboration of the state and municipal authorities</p> <p>Activity 5.2.8: Promote the market expansion of best performing products via professional marketing technical assistance, to favour replication opportunities</p>
<p>5.3 Low impact and high yield biodiversity-friendly eco-tourism management with local communities (mostly non-GEF)</p>	
<p>Activity 5.3.1: Design and execute eco-tourism community management plans and regularize eco-tourism community operators pertaining to the following 6 communities: <i>Cuatro Palos</i>, <i>Bucarelli</i>, <i>Sta. María de Cocos</i>, <i>San Juan de los Durán</i>, <i>Madroño Landa</i>, and <i>Rio Blanco</i></p> <p>Activity 5.3.2: Demarcate 8 eco-tourism routes provided with facilities of environmental awareness building and interpretation</p> <p>Activity 5.3.3: Demarcate 2 defined routes for cyclists in collaboration with local authorities</p> <p>Activity 5.3.4: Establish and demarcate 2 routes for bird-watchers</p>	<p>Activity 5.3.5: Evaluate business performance in terms of client satisfaction and financial profitability of community operated eco-tourism to adapt strategy for phase II</p> <p>Activity 5.3.6: Appraise initial currently capacity of eco-tourism after phase I and adapt strategy accordingly</p> <p>Activity 5.3.7: Create a scheme for allocating eco-tourism financial utilities in site-specific conservation projects</p>
<p>5.4 Other sustainable productive practices (non-GEF)</p>	
<p>Activity 5.4.1 Collaborate in the establishment of a fabric manufacturing plant to provide with an alternative livelihood option to local communities</p> <p>Activity 5.4.2: Establish a pilot candle-manufacturing workshop and a ceramic handicraft workshop and develop the corresponding common commercial and distribution capacities</p> <p>Activity 5.4.3.: Implement a demonstrative programme establishing 350 household vegetable gardens in the communities pertaining to the 5 pilot areas</p> <p>Activity 5.4.4: Implement an integrated pilot programme of fruit gardening, planting 25,000 fruit trees for commercial purposes and establishing 3 fruit processing plants</p>	<p>Activity 5.4.5 Undertake a socio-economic and a business evaluation to adapt strategy</p> <p>Activity 5.4.6 Promote corporate investments in low-risk locations in the four surrounding states to ensure alternative livelihoods</p>
<p>5.5. Water supply, waste management and sanitation (non-GEF)</p>	

<p>Activity 5.5.1: Design and establish a demonstrative programme of building and community management of rainwater reservoirs in 5 pilot communities</p> <p>Activity 5.5.2: Promote water management practices for domestic and productive use</p> <p>Activity 5.5.3: Implement an extensive solid waste management plan in collaboration with communities and local authorities</p> <p>Activity 5.5.4: Permanent campaign of waste management in 150 communities in pilot areas</p> <p>Activity 5.5.5: Permanent participatory community cleaning campaigns in pilot areas</p> <p>Activity 5.5.6: Promote community participation to set-up up 2,800 ecological sanitation facilities in key municipalities and urban settlements</p> <p>Activity 5.5.7: Promote proper design and installation of 4 municipal dumps within the reserve and re-location 2 other ones</p> <p>Activity 5.5.8: Promote community operation of 100 recyclable materials stock centres</p>	<p>Activity 5.5.9: Undertake qualitative and quantitative performance evaluation and refine models and proposed technologies</p> <p>Activity 5.5.10 Support communities to set up 25 rainwater reservoirs and to replicate the experience with the collaboration of local or state authorities</p> <p>Activity 5.5.11: Promote multiplication of demonstration activities in new locations outside pilot areas, via field visits, workshops, distribution of extension service materials</p>
<p>OUTPUT 6: An environmental education and public awareness campaign is undertaken</p>	
<p>6.1 Reserve's biological richness and experience dissemination</p>	
<p>Activity 6.1.1: Design and implement a dissemination program of the Reserve's biological riches and environmental services at the local, state, national and international level including participation in international <i>fora</i> and development of marketing materials ranging from videos, photographic publications to technical information folders</p> <p>Activity 6.1.2: Implement a training programme for other national NGOs to enable effective replication at the local level</p>	<p>Activity 6.1.3: Undertake a promotion and experience sharing campaign to disseminate the pilot co-management model experience and achieved results among other NPA, at the national and international level</p>
<p>6.2 Environmental education campaign</p>	
<p>Activity 6.2.1: Carry out an environmental education programme imparted by GESG in collaboration with formal education institutions, attaining a regular audience of 17,000 students in 150 communities within the reserve</p> <p>Activity 6.2.2: Facilitate workshops addressed to local teachers in 200 local schools</p> <p>Activity 6.2.3: Carry out an adult environmental education programme, attaining a regular audience of 22,500 people</p> <p>Activity 6.2.4: Establish an environmental education centre in <i>Jalpan de la Sierra</i> provided with proper facilities and equipment</p> <p>Activity 6.2.5: Design and implement an environmental education programme aimed at promoting voluntary participation and at consolidating and training a permanent environmental broker force</p> <p>Activity 6.2.6: Co-ordinate the organization of 24 Environment Festivals per year, in collaboration with local communities</p> <p>Activity 6.2.7: Develop and transmit a radio programme 4 times per week in four radio stations (regional and state) reaching an audience of 50% of the Reserve inhabitants</p> <p>Activity 6.2.8: Promote the constitution of environmental groups and NGOs in the area through remunerated service-providing mechanisms and technical assistance</p>	<p>Activity 6.2.9: Consolidate the environmental education programme reaching a regular audience of 34,000 students within the reserve</p> <p>Activity 6.2.10: Extend awareness and environmental education activities to other communities in the influence areas of the four surrounding states</p>

IV. Project Implementation and Execution Arrangements

69. The implementation and execution arrangements for the full scale project are built upon the current management model operating in the Reserve. It will however be further developed and institutionalized through the project implementation. The national executing agency ultimately responsible for the delivery of project results and the use of project funds, is the National Commission on Protected Area (CONAPANP). This is a semi-autonomous entity under SEMARNAT that is charged with the federal responsibility of protected area management. An Implementation Protocol has been drawn up and signed between the Commission and GESG that delegates specific, decentralised authority to the latter for project implementation, building on comparative organizational strengths of both the Reserve Directorate unit (FRMU) and the GESG. As stipulated in the Protocol, the FRMU will supervise basic conservation and enforcement activities within the project while the GESG will supervise the remaining bulk of conservation and sustainable use interventions of the project. A project Steering Committee (PSC) will meet on a quarterly basis with the role of overseeing project planning, implementation and performance. It would consist of representatives from SEMARNAT, CONAPANP/FRMU, GESG and UNDP. Beyond field-level execution and implementation responsibilities, UNDP provide both technical and administrative backstopping to ensure results oriented management, proper administration of funds, will maintain project accounts, facilitate staff recruitment and procurement processes, monitor resource mobilization of baseline and agreed co-financing. Financial transactions will be subject to annual audits undertaken by internationally certified auditors. Finally there will be a considerable strengthening of the Reserve Technical Advisory Committee (TAC), that combine federal, state and local level representatives in the effort to mobilize and mainstream their interventions in accordance with the strategy and objectives of the proposed project and the Reserve management plan. Representatives from the State delegations of SEMARNAT, SEDESOL, SAGAR, PROFEPA together with State and Municipal governments, Universities, FRMU, GESG, PMU, UNDP and the NGO community, will ensure coordination and mainstreaming in the region together with overall project implementation and policy reform work.

70. The current management of the Sierra Gorda Biosphere Reserve is already considered as a best practice for community involvement in the management of certain core areas within the boundaries of the Biosphere Reserve. During project execution, the efficacy of this experience would be subject to evaluation, and lessons documented. Furthermore, the project will consciously seek to strengthen individual and institutional capacities with the GESG and community-based groups, to strengthen their ability to engage in collaborative management activities, such as participatory planning, management, oversight, and enforcement. Local community representatives already participate in the TAC, and would receive first preference for recruitment to project funded positions. Following an initial training needs assessment, priority training programmes would be designed and executed, focusing on conflict mediation skills, and participation in decision-making fora. Social mobilization activities would seek to construct conservation alliances between community groups, providing a powerful tool for influencing public opinion and building awareness. Private landowners will be actively involved in demonstration efforts of alternative use and conservation, ranging from sustainable husbandry to the design and execution of conservation set-asides within the Reserve and its immediate catchment areas.

V. Financial Arrangements

71. Incremental costs: The incremental costs to be financed by the GEF amount to US\$6,730,610 complemented by co-financing to the order of US\$ 13,922,070. The existing baseline has been conservatively estimated at about US\$ 11,071,040 over the seven years of the project, representing a total project cost of about US\$ 31,723,720. The GEF grant therefore amounts to 21 % of the total costs of the GEF Alternative, and the remaining 79 % will be contributed by many sources including the Government of Mexico, the protected area authorities (CONAPANP) and the GESG. The GEF resources have leveraged US\$ 2.07 for every US\$ 1 from the GEF. The incremental cost analysis and matrix sets out the rationale for the differential financing of project activities. GEF resources will be targeted to activities consistent with

GEF guidelines for incremental funding. This project was prepared at an estimated cost of US\$ 340,000 by the GESG and INE-SEMARNAT with the support of UNDP.

OUTPUTS	PHASE 1 (USD)		PHASE 2 (USD)		Total	
	GEF	Co-financing	GEF	Co-financing		
Output 1	GESG SEMARNAP 200,000	500,000 100,000 600,000	GESG SEMARNAP 37,800	125,010 25,000 150,010	987,810	
Output 2		Conabio Conacyt Gov. of Queretaro 190,000	50,000 50,000 65,300 165,300	GESG Gov. Of Queretaro 65,300	70,000 34,700 104,700	525,300
Output 3	GESG SEMARNAP Packard Foundation 1,205,208	878,300 821,700 400,000 2,100,000	GESG SEMARNAP Packard Foundation 735,702	407,660 100,000 100,000 607,660	4,648,570	
Output 4	GESG 650,000	200,000 200,000	GESG 100,000	50,000 50,000	1,000,000	
Output 5	SAGAR SEDESOL SEMARNAP Private 616,600	1,329,680 1,025,680 1,367,672 1,142,000 4,865,032	SAGAR SEDESOL SEMARNAP Private 1,120,300	288,320 192,320 550,428 858,000 1,889,068	8,491,000	
Output 6	GESG SEDESOL Gov. of Queretaro Packard Foundation 633,928	313,904 1,358,450 80,000 189,950 1,942,304	GESG SEDESOL Gov. of Queretaro Packard Foundation 1,175,772	192,496 930,450 20,000 105,050 1,247,996	5,000,000	
Full project	3,495,736	9,872,636	3,234,874	4,049,434	20,652,680	
Grand total phase 1+phase 2		GEF 6,730,610	Co-financing 13,922,070	Total 20,652,680		
Project preparation			340,000			

72. Cost-effectiveness: The proposed alternative management model whereby the responsibilities are explicitly shared between an NGO and the government is expected to enhance the cost effectiveness of management and should improve the efficacy of both rural development and forest conservation efforts. The project, rather than creating *new* structures, with high transaction and learning curve costs, is investing in a successful experience of community work and aims at consolidating an already operative co-management structure. The future costs of restoring the Reserve, should they be degraded, would be prohibitive, particularly given the sensitivity of these ecosystems. The loss of biodiversity induced by the current agricultural and livestock practices would likely be irreversible. This project is taking the precautionary and fully participatory approach to conservation as the most cost-efficient.

73. Stakeholder participation in project design work: Extensive efforts have been made to identify and involve all major stakeholders during the process of project development. Aside from national, state, municipal and ejido authorities, stakeholders include communities residing within the Reserve, NGOs, academic institutions and the private sector. These groups have been consulted at different times and using different approaches. Fundamentally there have been two distinct phases of project development. The first phase includes in effect the ongoing dialogue that the GESG has established with the local and federal stakeholders through their 12 years of work in the region. This work has identified the state of conservation and use in the area together with threats and possible changes in the current use and conservation patterns. In the last few years 18 workshops were conducted with the participation of local communities, 64 meetings were organized to build consensus during project development and more than 120 community assemblies were organized providing a forum for open participatory assessment of threats and management needs. The reserve inhabitants have expressed considerable support for the project. Extensive contact has been made with the private sector with the objective of building a public-private partnership. Other consultations were convened with local fruit farmers, farmer organizations and cattle raisers. The consultations have provided an opportunity for stakeholders to guide project design. The preparation of a series of diagnostic studies to inform the process of designing project interventions complemented the project design. The second phase of project preparation has consisted of more external involvement exemplified through a total of 6 missions to Sierra Gorda with UNDP staff, national consultants and GESG and FRMU staff. During these missions extended field visits have been carried out together with frequent consultations with local communities, municipal representatives, state governments, federal support program delegations and other local stakeholders. In addition the GESDG and the FRMU have maintained extensive consultations with relevant local and federal stakeholders, including a number of presentations of the project proposal to the CONAPANP and possible national and international donors both in Mexico and abroad. The project has been developed following close consultation with the other GEF Implementing Agencies through the in-country Inter-agency GEF Coordination Committee, the National GEF Project Coordination Committee, and the joint GEF-GoM working group that is preparing the Programmatic Framework on Biodiversity.

VI. LEGAL CONTEXT:

74. This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Mexico and the Special Fund, then the United Nations Development Programme, signed by the parties on 23rd July 1963. The host country-Implementing Agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating/Executing Agency described in that Agreement. Nothing contained within this document or in contractual documents signed in light of this document, will be interpreted as an explicit or tacit renouncement of the immunity of jurisdiction, privileges, exceptions or other immunity enjoyed by UNDP in virtue of the Convention of prerogatives and immunities of the United Nations, to which the Government of Mexico is signatory. The Government of Mexico will assume the risks associated with the operations initiated by this project, and will respond to any claims made by third parties against UNDP, their employees or other people delivering project services in their name. This disposition will not apply in the circumstances where UNDP and the Government of Mexico can prove that the complaints and the corresponding responsibilities are consequences of serious neglect or international misconduct on behalf of the people mentioned.

75. The following types of revisions may be made to this Project Document with the signature of the UNDP Resident Representative, provided he or she is assured that the other signatories of the Document have no objections to the proposed changes:

- a) Revisions or additions to any of the annexes of the project document;

- b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of a project, but are caused by the rearrangement of inputs already agreed to or by cost increases due to inflation; and
- c) Mandatory annual revisions which rephase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility.

VII. Sustainability of Project Results:

76. Overall sustainability: The strongest argument in support of this proposal lies on the fact that the project is building upon a proven institutional capacity and practically guaranteed sustainability of GESG. Moreover, all proposed activities have been developed following extensive consultation and consensus building with affected local communities for more than twelve years. The project will make a major investment to consolidate and scale up the advocacy and awareness raising in order to strengthen environmental consciousness amongst stakeholders, so as to deepen their commitment. Institutional agreements with SEMARNAT, SAGAR, SEDESOL, and the State government have already permitted demonstrative experiences of policy mainstreaming and the mobilization of significant co-financing, thus demonstrating the government’s commitment to the approach. Over the longer-term, global environmental benefit flows will hinge upon the ability of communities to uncover tangible benefits from environmental management and to internalize the costs and benefits of conservation in their land use allocation decisions.

77. Operational sustainability: A cost recovery and operational sustainability plan was elaborated during project development. The project will demonstrate a self-financing scheme based on a progressively increasing coverage of the Reserve recurrent costs, to ensure operational continuity at the end of the project. Called the Saving and Sustainability Fund, it will secure deposits arising from a set of services provided by GESG and FRMU to corporate, public and non governmental clients. Income composition include fees allowed by investing corporations for business organization services and coordination of smallholders in the context of high-yield biodiversity-friendly forestry plantations, technical assistance fees for services provided to local producers, and commissions on eco-tourism planning and operation services. In the second phase, the GESG and FRMU will provided training and technical assistance to other NGOs and NPA through training and technical assistance agreements with CONAPANP, to replicate successful strategies and strengthen capacities. Full operational sustainability is expected from year 5.

78. Project risks: The root causes of threats to biodiversity are presented in Annex H and have guided design of project interventions. Project planners have carefully weighed the likelihood of these fundamentals changing over the course of implementation and assessed the impact on outcomes. The proposed adaptive management strategy is to mitigate the risk of such impacts. In general, the risks are greatly outweighed by the anticipated global benefits that will be derived from this successful intervention, particularly given the spin-off effects from replication in other reserves in Mexico.

Risk	Rating	Abatement Measure
Political turnover (changes in Government administration) causes major changes in policy priorities. Frequency of municipal leadership turnover.	M	The strongest argument in support of the proposed co-management model is the possibility of offsetting political risk in long-term conservation strategies. The incoming government has stated in dialogues with the outgoing administration that the in-situ conservation focus/policies established during the last 6 years will be continued. The co-financing anticipated for this project has built in risk measures in that it is a very moderate estimate on possible funding from the mayor federal programs most

		heavily involved in the region. They also represent programs that are considered vital in the current poverty alleviation effort in Mexico, both by the current and new government. Moreover, UNDP will maintain a close dialogue with the new administration to ensure policy and other commitments are fully honoured. The TAC is outside of the political cycle.
Delays in the appropriation of financial commitments.	L	The appropriation of co-financing in phase 1 is a prerequisite for graduation to phase 2. The resource mobilization experience of GESG offsets to some extent this risk. SEMARNAT is committed to increasing the amount of financial support to the Sierra Gorda reserve and has included the Sierra Gorda region as an eligible region under the forest promotion projects.
Lack of success at the local level to induce interest in adopting new technologies, farming and silvo-pastoral systems.	M	This risk will be diminished through a careful and structured cultural change, by creating a set of incentives for sustainable use of biological resources, and by involving communities in planning and designing new management systems.
Mismatched programming of project and baseline activities.	L	Strong management experience of GESG can reduce this risk. The Technical Project Steering Committee will play an active role in negotiating agreements and resolving institutional conflicts. The phased approach is designed to enhance the policy leverage exercised through the project.

79. **Project Replicability:** The project will demonstrate a co-management model for biodiversity conservation in protected areas that places special emphasis on shared responsibilities based on comparative institutional advantage. This model will have broad possibilities for replication in other areas of the country and the region, through official fora such as the protected areas managers meetings, as well as targeted workshops for key decision-makers. The enhanced role of the TAC under the project will substantially advance the stakeholder participation agenda promoted by the current administration through intensive training and real opportunities for social participation in biodiversity conservation. Lessons learned from this experience will have wide replicability in other protected areas in the country, including those with indigenous population. The Federal Administration is currently negotiating a wide-ranging technical assistance compact with GESG for long-term training and capacity building in other protected areas in the national system. Local cost recovery mechanisms planned under the project will broaden the menu of financial options for protected areas included in the SINAP, while promoting the development of marketable local technical capacities. GEF will benefit from useful information generated on full-project modalities delegated to NGO executing parties that should have universal application.

VIII. Monitoring , Evaluation and Lessons Learned

80. **Monitoring:** The project management will be followed-up through frequent meetings of a project Steering Committee capitalizing on the project management tools developed by the UNDP country office, including a computerized project monitoring system (PMS), a computerized activity-based costing system (ABC) and the financial information management system (FIM). Activity progress reports will be submitted to UNDP prior to each quarterly meeting of the Steering Committee, on the basis of the information generated on project impact, technical reports, PA monitoring scorecard, and the financial sustainability

indicators. Corrective action will be taken in project activities based on recommendations included both in the progress reports and as a result of evaluation of possible exogenous factors which are included as assumptions in the project's log frame. Complementarily, a tri-partite review meeting between GESG, SEMARNAT-CONAPANP, and UNDP will be held once a year to review overall project progress.

81. Detailed biological and social and economical surveys will be undertaken to provide a seasonally adjusted baseline for future monitoring and to provide a basis for adaptive management. In addition, field surveys will be sponsored during the life of the project to ascertain population trends for keystone species. A set of indicators of impact has been selected during project preparation and is provided in the log frame (Chapter 3.2). This includes the area under cultivation and sustainable use, that area of largest habitat blocks, the area under conservation, area under restoration, area of livestock ranches, number of producers using sustainable exploitation activities, number of people participating in conservation activities, and frequency and intensity of wildfires, storm flows and sediment flows. Surveys would also chronicle the social and economic impact of project intervention and appraise social relation and conflicts between different stakeholders and stakeholder perception of the project impact. Approximate estimates for the entire project intervention in terms the carbon sequestration impacts will be systematically gathered during project execution, divided by the main direct project components such as reforestation, plantations and recuperation initiatives promoted by the project.

82. Evaluation: Annual mandatory evaluation will be performed, as part of the regular programming of the UNDP country office and results will adapt project strategies. In addition, participatory evaluation exercises will be undertaken annually with local community, grassroots organizations and NGO representatives. Two mandatory independent evaluations are scheduled, one at the end of year four, prior to the completion of the first phase and the second towards the conclusion of the project. The first phase evaluation will check to ensure that the triggers for commencement of the second phase have been satisfied. The terminal evaluation will document the lessons learned from the project to inform further policy development.

83. The lessons learned from other similar integrated conservation and development projects (ICDPs) in the developing world have been incorporated into the design of this project. The following table lists some of these that are frequently cited in evaluation reports throughout the world:

Lessons Learned	Design Feature
Need to identify site specific priority biodiversity features within the Protected Area as early as possible, in order to effectively design and adjust project interventions.	Addressed during project preparation and will be strengthened through targeted studies and assessments during project implementation.
Clear identification of the threats to biodiversity to drive project actions.	Ample threats analysis was carried out during project preparation and the elaboration of the management plan. Project activities have been designed to address these threats. Dynamic threat behaviour will be assessed for adaptive management purposes.
Need for extensive consultations with stakeholder institutions.	The project builds upon the extensive collaborative effort the GESG has done for more than 10 years in the region which is considered a best practice in Mexico. Implementing arrangements include participation of all relevant stakeholders in Reserve management decisions.
Need for sustained conservation awareness campaigns, targeting media, schools, villages and public officials.	This area of work has been the strength of the GESG in the region and it forms a natural backbone of the integral strategy of this project. Lessons learned have been incorporated in project design, and output 6 deals

Lessons Learned	Design Feature
Intensive training and capacity building for involved individuals and organizations are best practices.	exclusively with this issue. Training and capacity building activities are included in various outputs, aimed at the development of local capacities in all relevant aspects of conservation and sustainable use.
Demonstrated commitment and competence of executing agencies is a key factor of success in development projects.	GESG has more than 10 years of proven commitment and considerable success in the management of substantial resources. Co-management mechanism provides guarantees for sufficient institutional capacity for project goals.
Longer execution periods reduce pressure on project disbursement rates, allowing for corrective management through a phased approach.	This project has been divided into two phases over 7 years with the explicit objective of generating early learning experiences to drive project management, and to allow appropriate periods for community appropriation.
Clear and objective risk management is a key factor for project success.	Risks have been considered as a valuable input for project preparation and have been used to adjust project strategy. A risk abatement strategy is detailed above. Assumptions provided in log frame will form a key part of project evaluation.

8.1 SCHEDULE OF PROJECT REVIEWS AND EVALUATIONS

Project Document Signature: December 2000
Project Commencement: April 2001

PHASE 1

PLANNED DATES

- | | | |
|-----|--|----------------|
| 1. | Inception Report | June 2001 |
| 2. | 1 st Project Steering Committee (PSC) meeting | September 2001 |
| 3. | 1 st Annual Project Report (APR) | April 2002 |
| 4. | 2 nd PSC meeting | May 2002 |
| 5. | 3 th PSC meeting | November 2002 |
| 6. | 2 nd APR | April 2003 |
| 7. | First Independent Evaluation | February 2003 |
| 8. | 4 th PSC meeting | May 2003 |
| 9. | 5 th PSC meeting | November 2003 |
| 10. | 3 rd APR | April 2004 |
| 11. | 6 th PSC meeting | May 2004 |
| 12. | 4 th APR | April 2005 |
| 13. | 7 th PSC meeting | May 2005 |
| 14. | Second Independent Evaluation | June 2005 |

END OF PHASE 1

Phase 2

- | | | |
|-----|--|---------------|
| 15. | 8 th PSC meeting | October 2005 |
| 16. | 5 th APR | April 2006 |
| 17. | 9 th PSC meeting | May 2006 |
| 18. | 6 th APR | April 2007 |
| 19. | 10 th PSC meeting | May 2007 |
| 20. | Terminal Evaluation and Project review | February 2008 |
| 21. | Final Report | April 2008 |

Annex A: Incremental cost analysis

1. Broad development goals:

1.1 Under the current administration, the Government of Mexico has undertaken the operationalisation of its international commitments following the ratification of the Convention on Biological Diversity (CBD) in March 1993. It started the current six-year term with the formulation of an ambitious National Development Plan (1994-2000) that emphasised the national need to balance economic, social and environmental concerns in national growth patterns. With the support of the GEF, financial mechanism of the CBD, GoM developed the National Biodiversity Strategy through its nationally designated Commission for Biodiversity Knowledge and Use (CONABIO). The National Strategy defines four focus areas: i) protection of ecosystems, ii) valuation of biodiversity, iii) knowledge of biodiversity and its use and finally iii) diversified use of biodiversity. Within the chapter on biodiversity, GoM has implemented an in-situ policy instrument -National System of Protected Areas (SINAP)- with special rigour. In an effort to address the representativity of SINAP, GoM has expanded the total number of areas, from 99 in 1995 to 126 in 2000. This has been accompanied by a remarkable historical increase in the fiscal budget allocated for basic conservation activities in 36 priority protected areas, from 0,5 million USD in 1994 to 5 million USD in 2000.

1.2 Two strongly related priority issues of the current administration have been the decentralisation of the public sector and the promotion of an active participation of civil society in environmental planning and implementation. Some of the central points of this proposal were the increase in functions and attributions assigned to the lower levels of government (state and municipal), the decentralisation and federalisation of social policies, reforms in the fiscal system and strengthening of the municipal governments. The effort of SEMARNAT to strengthen SINAP by decentralising environmental policy planning, implementation and enforcement to the appropriate local level is considered part of this general approach. In the case of Sierra Gorda there has been a strong base of civil society involvement to promote environmental protection and sustainable use that was formalised in 1987 with the founding of the NGO “ Grupo Ecologico Sierra Gorda” (GESG). GESG has led the process of promoting biodiversity in the area that culminated in 1997 with the federal decree of the Sierra Gorda Biosphere Reserve. In close collaboration with GESG, the recently established Federal Reserve Management Unit has developed an ambitious management plan for the Reserve and has indicated a co-management model based on specialisation in competitive advantage functions and on capitalising on existing synergies.

2. Baseline:

2.1 Mexico is a country with exceptionally high levels of biological diversity (more than 10% of the count for the whole planet) and a great variation of ecosystems and endemism. Recent decades of development have nevertheless contributed to the disturbing fact that Mexico may have lost as much as 95% of its original tropical forest cover, more than half of its temperate forest cover and semi-arid vegetation. With this change in basic habitat conditions, the variety of species and their respective ecosystems are under high pressure, some in danger of extinction and others severely endangered. In Sierra Gorda, the existing 14 vegetation types are still quite well preserved on 253,000 hectares within the Reserve (of a total of 383,567 hectares), thanks to baseline efforts of conservation and disperse settlement patterns. However the gradual escalation of extensive livestock pastures (presently over 200,000 hectares), inappropriate land use within the traditional agricultural sector and illegal extraction of fauna and flora species, seriously threaten the existence of the unique ecosystem diversity found in the Sierra Gorda region.

2.2 Environmental baseline efforts have been developed in the region under the auspices of the GESG with the recent incorporation of the FRMU and its associated institutional instruments for Reserve planning

and monitoring. There has also been an increasing scientific interest in the region and its unique biological and cultural riches. At the planning level, many of the potential conservation and sustainable use options have been identified. At the implementation level, a lack of experience and potential funding to properly evaluate these options represent barriers to access more immediate federal and state program support. Below we briefly outline the baseline programmatic efforts by bundles of interventions that are equivalent to the four proposed GEF alternative project outputs.

2.3 Protected area planning and management: In the baseline scenario the Reserve management unit would dispose of a total amount of 461,000 USD over the next seven years for the management of the Biosphere Reserve, including personnel and basic operation costs. Current financial allocation to the Management Unit would allow only partial implementation of the management plan. In the same period, GESG would likewise have limited capacity to fulfil its intended functions within the co-implementation framework of the Reserve' management plan, with a total amount of US\$ 793,753 estimated for the same period. In specific, it would not be feasible to give the anticipated technical assistance to the five municipalities within the Reserve and the bordering ones in other states. In order for the co-management unit to influence policies and practices within local settlements, extra capacity to implement such policy changes must be established.

2.4 An effective monitoring and evaluation system is lacking in the RBSG. The funds available for research are modest [US\$ 90,000 for the 7 years including the ongoing and planned investigations of Universities at the state (University of Queretaro) and federal level], and the co-ordination and compilation centrally of its results is poor or non-existent. Existing data tends to be isolated in individual records, and specific impact assessments are not cross-referenced. Thus, targeted ecological evaluations and studies need to be carried out in co-ordination with mapping of hydrological and geological processes, land use patterns and carbon sequestration studies so as to be able to effectively structure the information. Baseline research focused efforts will make possible to monitor the development of keystone and endangered species, extension of different habitat types, land use, forest cover and its quality, socio-economic indicators in priority sites within the region. The categorisation of the available and anticipated data for the Reserve will strategically feed into a multi-attribute database to be used for the adaptive implementation of the project via ongoing monitoring and evaluation, and eventually as a permanent mechanism to effectively manage the Reserve. The State of Queretaro is currently funding in parts the development of a Geographic Information System (GIS), and this project will complement this initiative to insure proper purchase of needed hardware, programming and data entry.

2.5 Conservation and rehabilitation: In the business as usual scenario conservation and rehabilitation functions would be constrained to widely dispersed and limited activities mostly in the state of Queretaro. Mandatory audits of forest exploitation quotas, illegal hunting, provoked fires for productive purposes and illegal clearings are currently undertaken by the Attorney General's Office for Environmental Protection which has recently established a permanent office in the region with a total budget of US\$ 420,000 for the seven years. GESG and the FRMU have limited financial resources to multiply the creation of local species nurseries to be used for the conservation and rehabilitation of key habitats within the Reserve. The same applies to activities fundamental for conservation guided actions throughout the Reserve, such as establishment of routes for specific uses, demarcation programs, control and enforcement of agricultural and forestry practices, strategies to recuperate species of fauna and flora, and forest fires prevention and control programs. A number of programs for the construction of highly efficient wood-burning stoves, for the installation of dry latrines and for the establishment of community centres for solid waste recollection would be limited to a small number of communities, exclusively within the Reserve boundaries.

2.6 Sustainable livelihoods: Through their design and incentive structures, several federal and state productive programs have influenced the productive development of the region in the last few decades. Some sustainable productive development programs have been promoted recently in poor rural regions (SAGAR), technical assistance to promote social enterprises (SEDESOL) and reforestation programs, plantation

program with native species, wildlife conservation management units and conservation and restoration of soils (SEMARNAT). These ministries and SCT also make extensive use of temporary employment programs in the rural context, which have large potential for benefiting the environment if utilised properly. This baseline investment has been estimated to US\$ 7,713,000 over the 7 years of this project. To implement locally-driven and properly scaled interventions to halt environmental deterioration, a proven need for credible demonstrations of alternatives within livestock ranching, cultivation of fruits and vegetables, forestry and eco-tourism exists. Feasible and diversified use options will have to be assessed and adapted to the local environmental and social conditions so as to establish a wide ranging basis for poverty alleviation that offers solutions for the distinct land ownership categories found in the region. Important work in this regard is done in Mexico through two other GEF projects implemented by the World Bank. The first is the Indigenous community reserve project that demonstrates community reserve models with use and conservation options and the second is the Private land use project that will investigate and test modalities for protection of biodiversity on private lands.

2.7 Conservation awareness: with technical assistance and funding from the Sustainable Development Network project supported by UNDP, the GESG has produced a variety of informational material and campaigns that have reached especially primary school students. A massive awareness campaign with all the proper material produced and distributed to all relevant stakeholders through local, national and international channels of communication is lacking. Furthermore an intensive dissemination process of the management plan, norms, regulations and opportunities that stakeholders within the Reserve and its catchment areas should be aware of and capable of implementing at their corresponding levels of action. The baseline interventions under this component have been estimated at US\$ 1,594,000 for the project duration.

3. GEF alternative:

3.1 The proposed GEF alternative project is designed to address the identified threats and their root causes to recuperate and protect the globally significant biodiversity of the Sierra Gorda Biosphere Reserve. It proposes an effective and innovative solution for decentralised protected area management with direct civil society participation both through the executing NGO agency, GESG, as well as through locally identified and driven conservation and sustainable use initiatives. Through incremental GEF funding and a considerable increase in the sustainable development baseline, the project will formulate and implement pilot demonstrations of alternative sustainable use and conservation options for the distinct land ownership categories found in the region, thereby providing global and national environmental benefits. Additionally, the long-term financial sustainability of the NGO partner will be secured through a novel service-provision and technical assistance strategy that will generate direct income for the GESG. A brief description of the components of the GEF alternative follows below.

3.2 Reserve management infrastructure is strengthened: Full implementation of the ambitious SGBR management plan is constrained by the lack of infrastructure, especially in the areas of research, monitoring and evaluation, environmental education and access/eco-tourism routes. Under the project, biodiversity monitoring activities will be fully strengthened through the construction of a monitoring centre and the installation of a hydro-climatologic monitoring system in key sites within the Reserve limits (co-financing US\$80,000). Both the FRMU and GESG personnel will benefit from the improvement of Reserve office facilities and technical capacities will be improved with the planned upgrade of computer, GIS and remote sensing devices (co-financing US\$347,800; GEF US\$100,000). A new environmental education facility will be renovated and enlarged to promote regional educational efforts described in output 6 and to instil a local identity revolving around the SGBR (co-financing US\$50,000; GEF US\$52,790). It is expected that this improved capacity will allow for the identification of new biodiversity elements in the Sierra Gorda Region, and lessons learned have shown that increased visibility and presence of Reserve personnel result in more effective conservation and improved environmental consciousness.

3.3 Based on the rapid assessment studies that will identify hotspots and critical conservation sites within the RBSG and greater landscape, biodiversity monitoring and interpretation facilities will be located and made operational, notably enhancing the capacity of the FRMU and GESG to monitor biodiversity conditions in representative areas of the SGBR. It is expected that this additional capacity will result in the identification of new biodiversity elements in the region's diverse ecosystems. Lessons learned from earlier experiences have shown that improved federal presence in protected areas substantially increases the possibilities of effective conservation, thus the FRMU office will be enhanced through additional rustic infrastructure, and upgrading of basic office equipment.

3.4 A demarcation and sign posting effort will be carried out to fully define the reserve limits and to effectively publicise the nucleus zones in the region (co-financing US\$22,210; GEF US\$ 35,010). In addition to clearly demonstrating the reserve boundaries, sign posting will be used to discourage poaching, to discourage littering and to express special watershed conservation and recuperation zones (co-financing US\$145,000 GEF US\$50,000). Eco-tourism trails and special sites of interest in the SGBR will also be properly identified (co-financing US\$130,000). This component has an overall ratio of (1:3) for GEF resources versus co-financing.

3.5 Policy, ecological and socio-economic baseline assessments are undertaken: The project will systematise and complete available information on socio-economic conditions, biological richness, land use change patterns, and the conditions of watersheds and levels of land degradation in the Reserve and its influence area. Rapid assessments will also be carried out on key water generation and potential carbon storage sites with a focus on economic valuation of natural resource goods and services (co-financing US\$30,000; GEF US\$30,000). Special importance will be placed on supplementing existing social information on the communities located around the pilot core zones, including emigration rates, traditional economic activity and knowledge of the area's biological wealth (co-financing US\$20,000; GEF US\$30,000). Systematised information will be used to design a monitoring and evaluation system capable of producing a variety of site specific information, while guiding local development and implementation of alternatives for natural resource use and conservation.

3.6 The existing geographic information system currently under development t will be updated and modified to include variables that will be used to increase knowledge on global biodiversity issues, while providing for appropriate interface with CONABIO's SNIB. Following the gaps analysis to be carried out in the first months of the project (co-financing US\$30,000; GEF US\$30,000) targeted research, rapid assessments and surveys will be carried out that are necessary inputs in order to provide support for decision-making processes. These include, *inter alia*, basic research on population dynamics of key species, natural resource inventories, rapid assessment of biodiversity hot spots, as well as critical zones for forest fighting efforts, and the identification of key ecosystem functions and structures to set sustainable use parameters (co-financing US\$190,000; GEF US\$155,300).

3.7 Research findings will be published as part of the overall project dissemination efforts, and best practices will be documented to promote replication in other regions (GEF US\$10,000). The relationship between private and social ownership of natural resources will also be explored through the project (SGBR shows the highest amount of privately-owned land in the SINAP), to provide policy and decision makers at all three levels of government with important tools to promote wider understanding of biodiversity conservation and use issues. Because of its importance for decision making and dissemination efforts, overall GEF financing ratio for this component is (1.5:1).

3.8 Implementation of adaptive and participatory Reserve planning and management: While the government efforts to protect the Reserve and the initiatives of GESG are important steps towards the goal of protecting the globally significant biodiversity of Sierra Gorda, new approaches are needed to increase their potential. Under the project, the management capacity of the government and the GESG will be considerably strengthened mainly through co-financing and will generate additional resources for crucial activities that are

chronically under-funded or non-existent in the baseline scenario. GEF will have a catalytic role by funding the evaluation and redesign of management instruments for the Reserve, such as the expanded mission –both technical and social- of the TAC, which through the project will evolve into a local-level planning and evaluation body.

3.9 Corridors will be established in key sites within the Reserve to consolidate the conservation activities, and to orient and focus reforestation activities and the establishment of forestry plantations. New conservation modalities such as private conservancies and compensation regimes for environmental goods and services will be established, building on the experience of GESG in promoting private schemes for landscape preservation and gene pools.

3.10 Highly trained personnel and specialised equipment and infrastructure will be incorporated in the project co-ordination unit to provide an enabling environment for the instrumentation of the Reserve management plan. A comprehensive training package on conservation, ecology, conflict resolution and sustainable livelihood alternatives will be designed and implemented for Reserve management staff, GESG staff and TAC members, to reorient currently negative patterns of natural resources use and conservation (co-financing US\$70,000; GEF US\$100,000).

3.11 The TAC itself will be gradually transformed from its traditional ceremonial role into a regional planning and programming body. In its role as responsible agency for the implementation of the Reserve Management Plan, the TAC will negotiate re-oriented public policies with federal, state and local government agencies (co-financing US\$ 330,000;GEF US\$400,000). Its operational environment will be expanded to include the entire four-state region, and it will co-ordinate activities related to watershed management and carbon sequestration. Community-level committees and grass root organisations will be formed and strengthened to assist the TAC in Management Plan implementation in pilot areas of the project (co-financing US\$300,000; GEF US\$390,000).

3.12 GESG will see its operational sphere enhanced to include work in neighbouring regions and states, both through augmented technical capacity and through increased personnel dedicated to promote mainstreaming efforts and a regional conservationist identity revolving around the natural wealth of the Biosphere Reserve. A new model for decentralised protected areas management will be designed on the basis of a public-private partnership between the government and the GESG NGO partner, which can be applied to other protected areas in the country. For GEF, globally relevant information on NGO-execution of full-scale projects will be generated and documented during project implementation (co-financing US\$300,000; GEF US\$322,000).

3.13 Further zoning and demarcation work in various areas of the Reserve and its influence zones will be carried out in co-ordination with project activities directed towards the identification of corridors. It is expected that new influence zones will be identified in the broader geographical context of the reserve, and the information generated from zoning efforts will serve as inputs to an enhanced compliance environment in the Sierra Gorda region, anchored by the strengthening of the mixed compliance committees. Special emphasis will be placed on identifying recuperation zones and both geographical and load limits on eco-tourism in the region (co-financing US\$328,000; GEF US\$200,000).

3.14 Based on lessons learned through the operation of government-community committees for natural resource protection established by PROFEPA, as well as the experience gained by GESG in community organisation, field stations, locally based and adequately trained fire brigades will be established under a wildfire control programme (co-financing US\$205,960; GEF US\$400,000). This programme will identify and characterise high-risk areas in the Reserve and its influence area, building on remote-detection methodologies designed by CONABIO and rapid assessments to be carried out by GESG and the Reserve office, and the brigades will be established and located accordingly.

3.15 Additionally, GEF support will facilitate the development of local-level monitoring and evaluation efforts, applying data collection and monitoring methodologies developed by CONABIO, as part of a comprehensive approach to community-based conservation (co-financing US\$60,000; GEF US\$30,000). This strategic intervention will contribute to the development of permanent local capacity that will ensure the long-term technical viability of the project. Lessons learned from the training and promotion of local participation in research and monitoring activities will be documented in order to provide lessons learned for other conservation projects.

3.16 Financial sustainability of the Reserve management is assured: By year 7 of the project, full coverage of recurrent incremental costs will have been progressively attained through the development of diversified revenue-generating instruments that will feed into the existing Savings and Sustainability Fund (SSF) (co-financing US\$70,000; GEF: \$100,000). An informal group of financial and business experts will be convened to support the expansion of the SSF instrument and role, and formal business strategies will be created for each of the identified activities described below. Revenue streams and business practices will be constantly monitored to provide inputs for adaptable management of this component and to assess the progressive coverage of incremental recurrent costs (co-financing US\$30,000).

3.17 GESG will expand its role as a community broker to promote sustainable, high-yield commercial forestry ventures between private parties and interested small shareholders, generating placement fees for successfully negotiated contracts (co-financing US\$150,00; GEF US\$650,000). As described below, this strategy is based on the favourable economic environment for forestry that exists in the region. GESG, through the SSF, will also participate as a minority shareholder in these forestry ventures, receiving a small percentage of the commercialisation proceeds upon plantation maturity.

3.18 GESG will also increase its currently limited role in promoting and managing eco-tourism ventures, by implementing a fee-based structure for technical assistance and service provision to interested communities. Expected income will be based on differentiated fees for promotional activity (estimated 7%) and actual management of eco-tourism services (estimated 15%).

3.19 Finally, as part of the overall strategy of SINAP for the financial integrity of protected areas, and based on lessons learned during project preparation and implementation, from year 1 onwards GESG will expand its training and technical assistance role to provide specialised services to the entire protected areas system through signed agreements with CONAPANP. It is expected that large demand will exist for this type of service given the current lack of diversified and tested financial self-sufficiency regimes in the protected areas in Mexico. Lessons learned will be documented and widely disseminated.

3.20 Biodiversity friendly and sustainable livelihood alternatives are developed and demonstrated: A common barrier identified during the threats analysis underlying the logical framework of this project, was the lack of technical assistance to promote locally adapted agricultural, livestock and forestry practices. As is true in many regions of the country, it is much easier to access traditional subsidy elements of general federal and state productive programs. Likewise, the enormous potential of the Sierra Gorda region for both self-sufficiency and production of high quality goods both rests in and is hindered by the region's relative isolation. There is an urgent need to carry out extensive market access studies in the region, as well as studies that more precisely identify the comparative advantage of conservation activities over currently unsustainable practices that endanger the region's long-term biological integrity.

3.21 Through a phased approach, the GEF will fund diverse demonstration initiatives appropriate to the Reserve zoning and to local conditions, which would be backed by pre-feasibility studies, demonstrative modules, marketing studies and organisational solutions that increase local added value and promote a more equitable benefit sharing regime. Typical activities in this component would include productive schemes both for self-consumption and for small-scale commercialisation, commercial fruit and vegetable gardens-plantations, organic honey production and marketing, sustainable fish farming, sustainable forest

management modules and environmental goods and services production and commerce (co-financing US\$743,100; GEF US\$536,900).

3.22 Forestry maintains a strong comparative advantage over other productive activities in the region, especially livestock production. Forestry management programs will be enhanced through legal reform, the development of a targeted incentive program and training aimed at increasing market value of forestry products. (co-financing US\$825,000; GEF US\$200,000) Based on the recommendations generated by rapid assessments and other studies, high-yield commercial forestry plantations will be established in designated recuperation zones in the region. Through the brokerage of GESG, private sector entities will enter into partnership with small landholders to develop the plantations and commercialise and industrially transform the harvest products (co-financing US\$3,000,000; GEF US\$585,000).

3.23 Wildlife management and sustainable use modules will be instrumented in designated recovery zones, as well as old-stand forests, to provide economic incentives for conservation efforts. Demonstrative projects will be designed and carried out with fauna (white-tailed deer, butterflies) (co-financing US\$100,000; GEF US\$25,000) and diverse, highly prized flora (damiana, bay leaf, oregano, forest fruits and mushrooms, medicinal plants) (co-financing US\$155,000; GEF US\$150,000). These pilot projects will include market access studies and other enabling activities to promote the widespread assimilation of this instrument in critical zones of the Reserve. Overall ratio of this component is 1:6 GEF: co-financing.

3.24 Environmental awareness and promotion of conservation values: Important elements of environmental awareness exist in the region, fundamentally designed and implemented by the GESG with the support from UNDP and State level actors. However, a wider range of stakeholders needs to be reached and engaged to fully address the existent threats across the broader Sierra Gorda influence zone. This requires the design of expanded information campaigns and materials, that will promote a more direct influence on the protection and conservation of the biotic resources of the region. Technologically advanced approaches to local and regional environmental problems will be promoted through the GEF intervention, securing and expanding existing local management techniques. Very importantly, this process will encourage the formation of community environmental brokers to facilitate the cultural assimilation of these approaches, exchange between communities and work with private landholders (co-financing US\$551,800; GEF US\$400,000).

3.25 In support of increased environmental education efforts, effective surveillance and enforcement and the development of eco-tourism activities, the following investments are planned under the project. Current environmental education efforts have reached an important number of students, operating under severely limited conditions that impede a greater impact in the region. These efforts will be expanded to include the four-state region by the end of the project (co-financing US\$ 718,500; GEF US\$400,000). An effective methodology has been developed by GESG to reach and involve primary and secondary school students that nevertheless is hampered by the lack of updated materials and didactic tools. A modest contribution of GEF resources will leverage important resources from state and local governments for educational programs (co-financing US\$1,693,400; GEF US\$900,000). Overall ratio of GEF-cofinancing is 1:1,8 for this component.

4. Scope of analysis:

4.1 The geographic system boundary of this project is defined by the limits of the Biosphere Reserve and the catchment areas of importance within the state where the Reserve is located (Queretaro) plus three neighbouring states (Hidalgo, San Luis Potosi and Guanajuato). The Reserve has a surface area of 383,567 hectares spread over five municipalities, while the immediate influence areas to the Reserve -contemplated within this project- have an extension of roughly 100,000 hectares. The systems boundary of the project naturally extends beyond the Reserve area to be able to arrest threats to the natural resources of the Reserve and their attendant root causes, as they emanate from settlements bordering the Reserve.

5. Costs and the incremental cost matrix:

5.1 The baseline associated with the GEF project alternative has been estimated at 11,071 million USD over the 7 years duration of the project. The GEF alternative has a total cost of 31,723 million USD, of which the total increment is 20,652 million USD. GEF will fund the part of the increment that corresponds to the global environmental benefits generated, estimated at 6,730 million USD, whereas the increment balance will be covered by an increase in the sustainable development baseline of 13,922 million USD associated with the generation of national benefits.

A.1 INCREMENTAL COST MATRIX

Outputs	Baseline	Alternative	Increment
Output 1: Reserve management infrastructure is strengthened	<ol style="list-style-type: none"> 1. Insufficient infrastructure to perform biodiversity monitoring to inform conservation management US\$10,000 2. Deficient physical demarcation of the Reserve boundaries US\$ 5,000 3. Environmental education is imparted by visiting local primary schools and with deficient materials and facilities US\$100,000 4. Poor interpretative trails constitute an obstacle for low impact eco-tourism activities US\$5,000 5. Deficient surveillance infrastructure US\$5,000 6. Office spaces and facilities shared by GESG and FRMU are inappropriate US\$100,000 7. Insufficient field infrastructure for an integral scope of conservation and sustainable livelihood activities US\$25,000 <p>Sub-total: US\$ 250,000</p>	<ol style="list-style-type: none"> 1. Strengthen and expand coverage of biodiversity monitoring facilities through the establishment of a biodiversity monitoring center and the installation of a hydro-climatologic monitoring network US\$ 90,000 (baseline: US\$10,000 co-financing: US\$80,000) 2. Complete, reinforce and maintain the physical demarcation of Reserve's boundaries to put into effect the actual zoning and protection of key habitats US\$65,010 (baseline: US\$30,000 GEF: US\$35,010) 3. Renovate and enlarge environmental education facilities to accommodate larger number of students and update teaching materials and didactic tools US\$200,000 (baseline: US\$100,000 co-financing: US\$47,210 GEF: US\$52,790) 4. Design and establish environmental interpretation facilities as part of eco-tourism development plans developed US\$ 135,000 (baseline: US\$5,000 co-financing: US\$130,000) 5. Broaden surveillance routes network in collaboration with communities and landholders to enable actual monitoring and effective enforcement in selected key habitats US\$ 200,000 (baseline: US\$5,000 co-financing: US\$145,000 GEF: US\$50,000) 6. Improve office facilities, equipment and field structures in accordance with project pilot core areas and phased approach US\$ 547,800 (baseline: US\$100,000 co-financing: US\$347,800 GEF: US\$100,000) <p>Sub-total: US\$ 1,237,810</p>	<p>GEF: US\$237,800 Non-GEF: US\$ 750,010 § GESG: US\$ 625,010 § CONAPANP: US\$ 125,000</p> <p>Subtotal: US\$ 987,810</p>

<p>Output 2: Policy, ecological and socioeconomic baseline assessments are undertaken.</p>	<ol style="list-style-type: none"> 1. Various scientific research, analysis and publications on the global significance of the SGBR, provide insufficient baseline indication of ecosystem health US\$ 50,000 2. Isolated individual analysis and inventories of vertebrates, macromycetes, flowering plants and a hydrological survey US\$ 30,000 3. Deficient social baseline assessments and limited to few communities US\$10,000 <p>Sub total: US\$ 90,000</p>	<ol style="list-style-type: none"> 1. Compile, update and synthesize relevant existent biological assessments US\$ 110,000 (baseline: US\$50,000 co-financing: US\$30,000 GEF: US\$30,000) 2. Complete biological baseline though targeted investigation, with particular reference to conservation and sustainable use of globally significant biodiversity US\$ 375,300 (baseline: US\$30,000 co-financing: US\$190,000 GEF: US\$155,300) 3. Compile and complete social assessments of the communities pertaining to pilot core zones US\$ 60,000 (baseline: US\$10,000 co-financing: US\$20,000 GEF: US\$30,000) 4. Carry out an economic valuation of natural resources and environmental services, including water services and carbon storage to back up negotiations with public and private decision-makers US\$ 60,000 (co-financing: US\$30,000 GEF: US\$30,000) 5. Publish research findings to socialize obtained results versus baseline, to favour replication of best practices US\$ 10,000 (GEF: US\$10,000) <p>Sub-total: US\$ 615,300</p>	<p>GEF: US\$ 255 300 Non-GEF: US\$ 270 000</p> <ul style="list-style-type: none"> § Conabio: US\$ 50,000 § Conacyt: US\$ 50,000 § GESG: US\$ 70,000 § State of Queretaro: US\$100,000 <p>Subtotal: US\$525, 300</p>
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<p>Output 3: Implementation of adaptive and participatory Reserve planning and management</p>	<ol style="list-style-type: none"> 1. A published Reserve Management Plan provide for an overall planning framework for the intervention of this project US\$ 350,000 2. Co-managers (GESG and FRMU) working with limited capacities US\$ 10,000 3. Participatory planning and management limited to a few communities in the state of Queretaro US\$10,000 4. Insufficient staff to undertake conservation and promotion of sustainable-use activities US\$ 400,000 5. A TAC created as an advisory committee currently exceeding its statutory functions and latitude by undertaking inter-institutional coordination US\$30,000 6. Participatory conservation management activities not inclusive of transition areas in neighboring States US\$20,000 7. Sporadic support of governmental agencies to assist in enforcement of park regulations US\$20,000 8. Rarely proactive basic conservation interventions US\$20,000 9. Programs to rehabilitate degraded lands based on local species nurseries US\$ 20,000 10. An energy efficiency program US\$ 10,000 11. Insufficient wildfire prevention and control capacities US\$114,040 12. Audits of natural resource exploitation, illegal hunting and provoked fires for productive purposes US\$ 420,000 	<ol style="list-style-type: none"> 1. Published reserve management plan US\$ 350,000 (baseline: US\$350,000) 2. Select and contract project staff to make it sufficient for scaled up intervention in the buffer and transition zones of the 5 pilot areas during phase 1 and in the other areas during replication phase involving the four surrounding states (Queretaro, San Luis Potosi, Guanajuato and Hidalgo) US\$ 1,522,000 (baseline: US\$400,000 GEF: US\$1,122,000) 3. Improve capabilities of GESG and the RBSG for Reserve's co-management, including targeted and specific training in political negotiation and conflict resolution, business and environmental strategic planning and management, environmental law and community development and consensus building techniques US\$ 180,000 (baseline: US\$10,000 co-financing: US\$170,000) 4. Formalize the actual role of the Technical Advisory Committee (TAC) to transform it into a regional Co-ordination Committee US\$ 10,000 (baseline: US\$10,000) 5. Strengthen TAC in its capacity to re-orient public policies and redefine public works expanding its scope of intervention to the four surrounding states and to co-ordinate second-tier actions related with watershed services and carbon sequestration US\$760,000 (baseline: US\$30,000 co-financing: US\$630,000 GEF: US\$100,000) 6. Form and strengthen community level committees and grass root organizations to implement and monitor conservation and sustainable use initiatives in all pilot areas US\$ 600,000 (baseline: US\$10,000 co-financing: US\$300,000 GEF: US\$ 90,000) 7. Support CONAPANP to disseminate co-management best practices and to develop capacities to enable actual replication US\$ 20,000 (baseline: US\$20,000) 	<p>GEF: US\$ 1, 940,910 Non-GEF: US\$ 2,707,660 § CONAPANP: US\$ 921,700 § GESG: US\$ 1,285,960 § Packard Foundation: US\$ 500,000</p>
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	<p>Subtotal: US\$ 1,424,040</p>	<ol style="list-style-type: none"> 8. Deepen basic conservation and biodiversity protection activities in 5 identified key core areas, promoting land use regularization and enforcement US\$ 578,000 (baseline: US\$50,000 co-financing: US\$328,000 GEF: US\$200,000) 9. Strengthen strict conservation of key habitats for global bio-diversity through land rental or purchase US\$550,000 (co-financing: US\$518,700 GEF: US\$31,300) 10. Establish a carbon storage pilot project to set the basis for replication and the development of site-specific integrated ecosystem management models US\$ 80,000 (co-financing: US\$50,000 GEF: US\$30,000) 11. Establish natural regeneration of areas in selected sites US\$ 20,000 (GEF: US\$20,000) 12. Scale-up an energy efficiency program by promoting the setting up of 600 efficient wood-burning heaters US\$ 45,000 (baseline: US\$10,000 co-financing: US\$15,000 GEF: US\$20,000) 13. Strengthen wild fire prevention and control capacities through professional interventions, community brigades, awareness campaigns and related infrastructure to protect globally significant biodiversity US\$ 612,070 (baseline: US\$114,040 co-financing: US\$405,960 GEF: US\$ 92,070) 14. Strengthen monitoring of the SGBR in biological and social related matters to inform adaptive management US\$ 320,000 (co-financing: US\$290,000 GEF: US\$30,000) 15. Audits of natural resource exploitation, illegal hunting and provoked fires for productive purposes US\$ 420,000 (baseline: 420,000) 16. Operations UNDP US\$ 205,540 <p>Subtotal: US\$ 6,072,610</p>	<p>Subtotal: US\$ 4,648,570</p>
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<p>Output 4: Financial sustainability of the Reserve management is assured.</p>	<ol style="list-style-type: none"> 1. Limited annual budget for basic conservation activities provided by SEMARNAT and private funds 2. A <i>Saving and Sustainability Fund</i> (SSF) secures deposits arising from technical assistance services <p>Sub-total: US\$ 0</p>	<ol style="list-style-type: none"> 1. Annual budget for basic conservation activities provided by SEMARNAT and private funds 2. Strengthen the <i>SSF</i> to cover progressively incremental recurrent costs and ensure sustainability to broader intervention US\$ 170,000 (co-financing: US\$70,000 GEF: US\$100,000) 3. Strengthen GESG and FRMU business capacities for the provision of income generating services US\$ 800,000 (co-financing: US\$150,000 GEF: US\$650,000) 4. Assess business results and progressive coverage of incremental recurrent cost to adapt strategy US\$ 30,000 (cofinancing: US\$30,000) <p>Sub-Total: US\$ 1,000,000</p>	<p>GEF: US\$ 750,000 Non-GEF: US\$ 250,000 § GESG: US\$ 250,000</p> <p>Subtotal: US\$ 1,000,000</p>
<p>Output 5: Biodiversity-friendly and sustainable alternative livelihood options are developed and demonstrated.</p>	<ol style="list-style-type: none"> 1. Program to promote temporary employment US\$ 713,000 2. Program to substitute cyclical cultivars with perennials (Procampo) US\$ 1,000,000 3. A program to promote agricultural and livestock production (Alianza para el Campo) US\$ 2,700,000 4. Insufficient technological packages of sustainable agriculture (Procampo) US\$ 1,000,000 5. Technical assistance to for the production of organic farm products US\$ 500,000 6. Program to assist local farmers to prepare farm-level forest management US\$ 300,000 7. Insufficient support to local farmer organizations for the development of their farms US\$ 400,000 8. An incipient sustainable development program in the state of Queretaro as a valid alternative to replicate demonstration projects US\$ 500,000 9. Insufficient promotion of eco-tourism services in national and international tourism networks US\$ 100,000. 	<ol style="list-style-type: none"> 1. Provide highly appealing sustainable livelihood options via the development of strategic partnerships between smallholders and private corporations to develop high-yield commercial plantations, in total 7000 Has over the project duration US\$ 3,585,000 (co-financing: US\$3,000,000 GEF: US\$585,000) 2. Provide sustainable livelihood options through the promotion of timber by-products extraction and commercialisation in top timber-producing areas US\$140,000 (co-financing: US\$100,000 GEF: US\$40,000) 3. Put in general practice alternative livelihood options by testing sustainable commercial management projects of highly valued <i>cycades</i> and <i>white-tailed deer</i> and promoting their replication US\$ 125,000 (co-financing: US\$100,000 GEF: US\$25,000) 4. Put in general practice alternative livelihood options by testing the commercial viability of non-timber products like <i>damiana</i>, <i>oregano</i>, <i>pine-nut</i>, and <i>bay leaf</i>, <i>palms</i>, <i>mushrooms</i>, <i>medicinal plants</i>, <i>forest fruits</i> and <i>butterflies</i> US\$ 305,000 (co-financing: US\$155,000 GEF: US\$150,000) 	<p>GEF: US\$ 1,736,900 Non-GEF: US\$ 6,754,100 § SAGAR: US\$ 1,618,000 § SEDESOL: US\$ 1,218,000 § SEMARNAT: US\$ 1,918,100 (Forestal+PET+Queretaro) § Private: US\$ 2,000,000</p>

	<p>10. Insufficient and inefficient water supply waste management and sanitation facilities US\$ 500,000</p>	<p>5. Provide forestry management with an enabling environment via a reform of the regulatory framework, targeted incentives and downstream market integration US\$1,025,000 (co-financing: US\$825,000 GEF: US\$200,000)</p> <p>6. Promote sustainable agricultural practices including fruit and vegetable gardening, seed productions, intensive ranching practices, fish farms and ornamental bird US\$ 1,280,000 (co-financing: US\$743,100 GEF: US\$536,900)</p> <p>7. Promote massive replication of successful experiences through re-orientation of existing sustainable and biodiversity friendly forestry programs (SEMARNAT) US\$ 1,713,000 (100% baseline)</p> <p>8. Promote massive replication of successful experiences through re-orientation of existing livelihood packages (SEDESOL) US\$ 3,500,000 (100% baseline)</p> <p>9. Promote massive replication of successful experiences through re-orientation of existing agricultural and livestock support programs US\$ 2,500,000 (100% baseline)</p> <p>10. Provide alternative livelihood options to local communities through the development of low-impact high yield biodiversity friendly eco-tourism US\$ 542,000 (co-financing: US\$342,000 GEF: US\$200,000)</p> <p>11. Promote other sustainable productive practices including a fabric plant and a candle-manufacturing workshop and other corporate investments in low risk locations US\$ 229,000 (100% co-financing)</p> <p>Promote sustainable water supply, waste management and sanitation to improve livelihoods in the Reserve communities US\$ 1,260,000 (100% co-financing)</p>	
	<p>Sub-total: US\$ 7,713,000</p>	<p>Sub-total: US\$ 16,204,000</p>	<p>Sub-total: US\$ 8,491,000</p>

Output 6: An environmental education and public awareness campaign is undertaken	<ol style="list-style-type: none"> 1. Insufficient biological information to build awareness programs effectively US\$ 32,700 2. Low value attributed to environmental education. Sporadic and insufficient courses on environmental education US\$ 61,300 3. Inadequate implementation of the reform of the national education system for incorporating environmental education into curricula US\$ 200,000 4. Insufficient and incomplete environmental education material US\$ 100,000 5. Environmental education activities limited to a few communities within the Reserve boundaries US\$ 1,200,000 	<ol style="list-style-type: none"> 1. Expand the coverage and reach of the Reserve's biological information to build awareness at the local, state, national and international level US\$ 62,700 (baseline:US\$ 32,700 co-financing: US\$30,000) 2. Promote the constitution of environmental groups and NGO in the four surrounding states to expand environmental awareness reach US\$ 901,800 (co-financing: US\$551,800 GEF: US\$350,000) 3. Enhance the impact of the GEF supported co-management experience backing up replication through technical assistance US\$ 151,300 (co-financing: US\$ 51,300 GEF: US\$ 100,000) 4. Impart environmental education activities within the Reserve boundaries US\$ 1,200,000 (100% baseline) 5. Expand the environmental education reach to cover a significant part of the four-states population US\$ 1,118,500 (co-financing: US\$718,500 GEF: US\$400,000) 6. Reorient the existing educational federal and state programs US\$ 2,954,700 (baseline: US\$361,300 co-financing: US\$1,693,400 GEF: US\$900,000) 7. Organization of environmental festivals, radio programs weekly and environmental broker training US\$ 205,000 (co-financing: US\$145,300 GEF: US\$59,700) 	<p>GEF: US\$ 1,809,700 Non-GEF: US\$ 3,190,300 \$ GESG: US\$ 506,400 \$ State Govnt. Of Queretaro: US\$100,000 \$ SEDESOL: US\$ 2,288,900 \$ Packard Foundation:: US\$295,000</p>
	Sub-total: US\$1,594,000	Sub-total: US\$ 6,594,000	Sub-total: US\$ 5,000,000
Totals			GEF: US\$6,730,610
			NON GEF: US\$ 13,922,070
	Total: US\$11,071,040	Total: US\$ 31,723,720	Total: US\$ 20,652,680

Annex B: Gef Inputs

1. GEF (US \$)

GEF funding would provide for the following project inputs

BL	Post Title	Total (M/M)	Cost
10	PERSONNEL		
13	ADMINISTRATIVE SUPPORT		
1301	MAINTENANCE CHIEF	81	109,856
1302	ACCOUNTANT GENERAL	81	109,856
1303	ADMINISTRATIVE ASSISTANT	81	74,842
1399	LINE TOTAL		294,553
17	NATIONAL PROFESSIONALS		
1701	DIRECTOR GENERAL	81	362,166
1702	SUSTAINABLE PRODUCTION COORDINATOR	81	244,856
1703	HOLISTIC IMPROVEMENT COORDINATOR	81	244,856
1704	MONITORING AND EVALUATION COORDINATOR	81	208,964
1705	POLITICAL ALLIANCES COORDINATOR	81	208,964
1706	ADMINISTRATION COORDINATOR	81	208,964
1707	MONITORING AND REPORTING CHIEF	81	109,856
1708	RESEARCH AND STUDIES CHIEF	81	109,856
1709	PUBLIC RELATIONS UNIT CHIEF	81	109,856
1710	TRAINING CHIEF	81	109,856
1711	RESOURCE MOVILIZATION UNIT CHIEF	81	280,740
1712	ASISTANT TO DIRECTOR GENERAL	81	69,550
1799	LINE TOTAL		2,268,482
15	DUTY TRAVEL		
1501	TRAVELS		485,821
1599	LINE TOTAL		485,821
19	PERSONNEL TOTAL		3,048,856
20	SUBCONTRACTS		
21	SUBCONTRACTS A		
2101	ENVIROMENTAL EDUCATION STRATEGY AND PROGRAMME		1,828,475
2102	SUSTAINABLE PRODUCTION STRATEGY AND PROGRAMME		901,481
2199	LINE TOTAL		2,729,955
29	SUBCONTRACTS TOTAL		2,729,955
40	EQUIPMENT		
45	EQUIPMENT		
4501	LOCAL PROCUREMENT		127,948
4502	MAINTENANCE		134,366
4503	OPERATIONS (UNDP)		205,540
4599	LINE TOTAL		557,854
49	EQUIPMENT TOTAL		557,854
50	MISCELLANEOUS		
52	REPORTING COST		
5202	DIDACTIC MATERIAL		40,710

5299	LINE TOTAL	40,710
53	SUNDRIES	
5301	MISCELLANEOUS	149,684
5302	TAX REIMBURSEMENTS	-
5303	ENVIRMONMENTAL SERVICES INCENTIVES	203,550
5399	LINE TOTAL	353,234
59	MISCELLANEOUS TOTAL	393,944
99	BUDGET TOTAL	6,730,610

Annex C: Gef Budget

1. GEF

BL	Description	Total	2001	2002	2003	2004	2005	2006	2007
10	PROJECT PERSONNEL								
13	ADMINISTRATIVE SUPPORT PERSONNEL								
1301	MAINTENANCE CHIEF	109,856	10,530	14,603	15,333	16,099	16,904	17,750	18,637
1302	ACCOUNTANT GENERAL	109,856	10,530	14,603	15,333	16,099	16,904	17,750	18,637
1303	ADMINISTRATIVE ASSISTANT	74,842	7,350	9,923	10,419	10,940	11,487	12,061	12,664
1399	LINE TOTAL	294,553	28,411	39,128	41,084	43,138	45,295	47,560	49,938
17	NATIONAL PROFESSIONALS								
1701	DIRECTOR GENERAL	362,166	34,508	48,171	50,580	53,109	55,765	58,553	61,480
1702	SUSTAINABLE PRODUCTION COORDINATOR	244,856	23,360	32,564	34,192	35,902	37,697	39,582	41,561
1703	HOLISTIC IMPROVEMENT COORDINATOR	244,856	23,360	32,564	34,192	35,902	37,697	39,582	41,561
1704	MONITORING AND EVALUATION COORDINATOR	208,964	19,949	27,788	29,178	30,637	32,169	33,777	35,466
1705	POLITICAL ALLIANCES COORDINATOR	208,964	19,949	27,788	29,178	30,637	32,169	33,777	35,466
1706	ADMINISTRATION COORDINATOR	208,964	19,949	27,788	29,178	30,637	32,169	33,777	35,466
1707	MONITORING AND REPORTING CHIEF	109,856	10,530	14,603	15,333	16,099	16,904	17,750	18,637
1708	RESEARCH AND STUDIES CHIEF	109,856	10,530	14,603	15,333	16,099	16,904	17,750	18,637
1709	PUBLIC RELATIONS UNIT CHIEF	109,856	10,530	14,603	15,333	16,099	16,904	17,750	18,637
1710	TRAINING CHIEF	109,856	10,530	14,603	15,333	16,099	16,904	17,750	18,637
1711	RESOURCE MOBILIZATION UNIT CHIEF	280,740	26,770	37,338	39,205	41,165	43,223	45,385	47,654
1712	ASSISTANT TO DIRECTOR GENERAL	69,550	6,700	9,240	9,702	10,187	10,696	11,231	11,793
1799	LINE TOTAL	2,268,482	216,666	301,653	316,735	332,572	349,201	366,661	384,994
15	DUTY TRAVEL								
1501	TRAVELS	485,821	42,725	65,509	68,784	72,223	75,835	79,626	81,118
1599	LINE TOTAL	485,821	42,725	65,509	68,784	72,223	75,835	79,626	81,118
19	PERSONNEL TOTAL	3,048,856	287,802	406,289	426,604	447,934	470,331	493,847	516,050
20	SUBCONTRACTS								
21	SUBCONTRACTS A								
2101	ENVIROMENTAL EDUCATION STRATEGY AND PROGRAMME	1,828,475	182,266	242,021	254,123	266,829	280,170	294,179	308,887
2102	SUSTAINABLE PRODUCTION STRATEGY AND PROGRAMME	901,481	88,883	119,466	125,439	131,711	138,297	145,212	152,472
2199	LINE TOTAL	2,729,955	271,149	361,487	379,562	398,540	418,467	439,390	461,360
29	SUBCONTRACTS TOTAL	2,729,955	271,149	361,487	379,562	398,540	418,467	439,390	461,360

40	EQUIPMENT								
45	EQUIPMENT								
4501	LOCAL PROCUREMENT	217,948	217,948						
4502	MAINTENANCE	134,366	13,740	18,461	18,985	19,934	20,642	21,212	21,392
4503	OPERATIONS (UNDP)	205,540	33,048	25,127	26,372	28,590	29,066	30,506	32,830
4599	LINE TOTAL	557,854	264,736	43,588	45,357	48,525	49,708	51,718	54,222
49	EQUIPMENT TOTAL	557,854	264,736	43,588	45,357	48,525	49,708	51,718	54,222
50	MISCELLANEOUS								
52	REPORTING COST								
5202	DIDACTIC MATERIAL	40,710	5,000	5,250	5,513	5,788	6,078	6,381	6,700
5299	LINE TOTAL	40,710	5,000	5,250	5,513	5,788	6,078	6,381	6,700
53	SUNDRIES								
5301	MISCELLANEOUS	149,684	14,700	19,845	20,837	21,879	22,973	24,122	25,328
5302	TAX REIMBURSEMENTS								
5303	ENVIRONMENTAL SERVICES INCENTIVES	203,550	25,000	26,250	27,563	28,941	30,388	31,907	33,502
5399	LINE TOTAL	353,234	39,700	46,095	48,400	50,820	53,361	56,029	58,830
59	MISCELLANEOUS TOTAL	393,944	44,700	51,345	53,912	56,608	59,438	62,410	65,531
99	BUDGET TOTAL	6,730,610	868,387	862,710	905,435	951,606	997,944	1,047,365	1,097,163

Annex D: Co-Financing Inputs

2. CO-FINANCING (US \$)

Co-financing funding would provide for the following project inputs

BL	Post Title	Total (M/M)	Cost
10	PERSONNEL		
1304	ADMINISTRATIVE ASSISTANT TO DEPUTY	81	78,000
1305	SECRETARY A	81	39,000
1306	SECRETARY B	81	39,000
1307	SECRETARY C	81	39,000
1308	SECRETARY D	81	39,000
1399	LINE TOTAL		234,000
1713	FRMU DIRECTOR	81	234,000
1714	DEPUTY DIRECTOR	81	218,400
1715	PRODUCTIVE DIVERSIFICATION CHIEF	81	156,000
1716	INSPECTION AND SURVEILLANCE CHIEF	81	156,000
1799	LINE TOTAL		764,400
19	PERSONNEL TOTAL		998,400
20	SUBCONTRACTS		
21	SUBCONTRACTS A		
2101	ENVIRONMENTAL EDUCATION STRATEGY AND PROGRAMME		4,818,400
2102	SUSTAINABLE PRODUCTION STRATEGY AND PROGRAMME		5,078,000
2103	VIGILANCE BRIGADE		273,000
2199	LINE TOTAL		9,896,400
29	SUBCONTRACTS TOTAL		9,896,400
30	TRAINING		
33	TRAINING		
3301	REGULATORY SUPPORT WORKSHOPS		766,050
3399	LINE TOTAL		766,050
39	TRAINING TOTAL		766,050
40	EQUIPMENT		
45	EQUIPMENT		
4501	LOCAL PROCUREMENT		303,700
4502	OPERATION AND MAINTENANCE		60,000
4599	LINE TOTAL		363,700
49	EQUIPMENT TOTAL		363,700
50	MISCELLANEOUS		
52	REPORTING COST		
5203	INTERNAL EVALUATIONS		290,360
5299	LINE TOTAL		290,360
53	SUNDRIES		
5301	MISCELLANEOUS		273,450
5303	ENVIRONMENTAL SERVICES INCENTIVES		583,700
5304	INFRASTRUCTURE COSTS-RESERVES		750,010
5399	LINE TOTAL		1,607,160
59	MISCELLANEOUS TOTAL		1,897,520
99	BUDGET TOTAL		13,922,070

ANNEX E: CO-FINANCING BUDGET

2. CO-FINANCING

BL	Description	Total	2001	2002	2003	2004	2005	2006	2007
10	PROJECT PERSONNEL								
1304	ADMINISTRATIVE ASSISTANT TO DEPUTY	78,000	6,000	12,000	12,000	12,000	12,000	12,000	12,000
1305	SECRETARY A	39,000	3,000	6,000	6,000	6,000	6,000	6,000	6,000
1306	SECRETARY B	39,000	3,000	6,000	6,000	6,000	6,000	6,000	6,000
1307	SECRETARY C	39,000	3,000	6,000	6,000	6,000	6,000	6,000	6,000
1308	SECRETARY D	39,000	3,000	6,000	6,000	6,000	6,000	6,000	6,000
1399	LINE TOTAL	234,000	18,000	36,000	36,000	36,000	36,000	36,000	36,000
1713	FRMU DIRECTOR	234,000	18,000	36,000	36,000	36,000	36,000	36,000	36,000
1714	DEPUTY DIRECTOR	218,400	16,800	33,600	33,600	33,600	33,600	33,600	33,600
1715	PRODUCTIVE DIVERSIFICATION CHIEF	156,000	12,000	24,000	24,000	24,000	24,000	24,000	24,000
1716	INSPECTION AND SURVEILLANCE CHIEF	156,000	12,000	24,000	24,000	24,000	24,000	24,000	24,000
1799	LINE TOTAL	764,400	58,800	117,600	117,600	117,600	117,600	117,600	117,600
19	PERSONNEL TOTAL	998,400	76,800	153,600	153,600	153,600	153,600	153,600	153,600
20	SUBCONTRACTS								
21	SUBCONTRACTS A								
2101	ENVIRONMENTAL EDUCATION STRATEGY AND PROGRAMME	4,818,400	438,036	481,840	418,991	569,024	876,073	963,680	1,070,756
2102	SUSTAINABLE PRODUCTION STRATEGY AND PROGRAMME	5,078,000	575,429	593,429	857,429	905,429	925,429	565,429	655,429
2103	VIGILANCE BRIGADE	273,000	21,000	42,000	42,000	42,000	42,000	42,000	42,000
2199	LINE TOTAL	9,896,400	1,013,465	1,075,269	1,276,420	1,474,453	1,801,501	1,529,109	1,726,184
29	SUBCONTRACTS TOTAL	9,896,400	1,013,465	1,075,269	1,276,420	1,474,453	1,801,501	1,529,109	1,726,184
30	TRAINING								
33	TRAINING								
3301	REGULATORY SUPPORT WORKSHOPS	766,050	73,000	118,050	121,000	118,000	108,000	105,000	123,000
3399	LINE TOTAL	766,050	73,000	118,050	121,000	118,000	108,000	105,000	123,000
39	TRAINING TOTAL	766,050	73,000	118,050	121,000	118,000	108,000	105,000	123,000
40	EQUIPMENT								
45	EQUIPMENT								
4501	LOCAL PROCUREMENT	303,700	203,700	100,000					

4502	OPERATION AND MAINTENANCE	60,000	25,000	35,000	-	-			
4599	LINE TOTAL	363,700	228,700	135,000	-	-	-	-	-
49	EQUIPMENT TOTAL	363,700	228,700	135,000	-	-	-	-	-
50	MISCELLANEOUS								
52	REPORTING COST								
5203	INTERNAL EVALUATIONS	290,360	41,480	41,480	41,480	41,480	41,480	41,480	41,480
5299	LINE TOTAL	290,360	41,480	41,480	41,480	41,480	41,480	41,480	41,480
53	SUNDRIES								
5301	MISCELLANEOUS	273,450	26,450	35,000	37,000	43,000	47,000	47,000	38,000
5303	ENVIRONMENTAL SERVICES INCENTIVES	583,700	67,000	80,000	78,000	87,000	93,000	95,314	83,386
5304	INFRASTRUCTURE COSTS-RESERVES	750,010	160,716	107,144	107,144	107,144	107,144	53,572	107,144
5399	LINE TOTAL	1,607,160	254,166	222,144	222,144	237,144	247,144	195,886	228,530
59	MISCELLANEOUS TOTAL	1,897,520	295,646	263,624	263,624	278,624	288,624	237,366	270,010
99	BUDGET TOTAL	13,922,070	1,687,611	1,745,543	1,814,644	2,024,677	2,351,726	2,025,075	2,272,794

Annex F: Work Plan

OUTPUT 1: Reserve management infrastructure is strengthened

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Activity 1.1 Infrastructure							
Activity 1.1.1: Establish and provide equipment for a biodiversity monitoring center							
Design of the project							
Construction of the center							
Equipment of the center							
Supervision and evaluation once the center is in operation							
Activity 1.1.2: Establish surveillance routes in critical zones of the Reserve and other surveillance facilities							
Selection of critical zones							
Make arrangements with the communities to clear and maintain the tracks							
Execution of the plan							
Supervision and evaluation of the work							
Activity 1.1.3: Design and build environmental interpretation facilities							
Preparation of the specifications and design for demarcation and meetings with the corresponding dependencies to determine the spots for demarcation							
Proposal elaboration and its interinstitutional negotiation							
Engage design and printing services							

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Assembling the signs, including giant signs							
Placing of three giant signs and seven signs with normative information							
Placing of 25 signs with information about the Reserve's biodiversity							
Conditioning and design of the environmental interpretation showroom							
Final conditioning							
Design and printing of materials							
Supervision and evaluation							
Activity 1.1.4: Install a hydro-climatologic monitoring system							
Follow up of the information generated by the climatological stations							
Incorporate the generated information to the GIS							
Activity 1.1.5: Building and maintaining a training center							
Design and interinstitutional negotiations of the project							
Construction of the environmental education center							
Equipping							
Supervision and evaluation of the work							
Activity 1.1.6: Establish improved office facilities and equipment and new field structures							
Review the requirements of the training center, central and link offices and the <i>Joya del Hielo</i> base							

ACTIVITIES	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		YEAR 6		YEAR 7	
Design and improvement of infrastructure														
Interinstitutional negotiations for equipment														
Construction and equipping of the environmental education center.														
Extension of the link and negotiations office in Queretaro City														
Construction of the San Juan de los Durán base														
Equipping														
Supervision and evaluation														
Activity 1.1.7: Complete and reinforce the demarcation of Reserve boundaries and signage and posting of the Biosphere Reserve														
Negotiations with authorities and owners														
Determine the boundaries of the Reserve with the San Luis Potosi State														
Activity 1.1.8 Strengthen infrastructure requirements for phase two core areas, particularly the field structures, equipment and facilities to enable management, research and monitoring in the whole Reserve and in buffer and transition zones of the four surrounding states														
Engage human resources and purchase of the necessary materials and execution of the work (placing the demarcation on the main access roads)														
Supervision and evaluation														

OUTPUT 2: Policy, ecological and socio-economic baseline assessments are undertaken

2.1 Baseline assessments

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Activity 2.1.1: Diagnose and gather existent relevant research on the reserve natural resources status and dynamics							
Project definition							
Research negotiations							
Gathering relevant information of the studies made about the Reserve							
Integration of the interdisciplinary team of experts							
Negotiation of the necessary equipment for the GIS integration							
Integration of the information to the GIS							
Digitalize the Reserve							
Activity 2.1.2: Update comprehensive baseline on biodiversity and establish a monitoring system on recuperation, conservation and change in land use							
Creation of a monitoring system for the evaluation of the percentage of use of soil and the state of forest cover							
Publication of the results of the biological, social and use of soil evaluation							
Activity 2.1.3: Targeted research							
Identify and map land use potential and patterns							
Assess and monitor key watershed quantitative and qualitative status and functions							

ACTIVITIES	YEAR 1			YEAR 2			YEAR 3			YEAR 4			YEAR 5			YEAR 6			YEAR 7		
Status and monitoring of key habitats																					
Endemic, endangered and charismatic species population dynamics																					
Vascular plant inventories																					
Activity 2.1.4: Identify and monitor influence activities and dynamics in core areas																					
Identify key communities																					
Follow up of public works processes																					
Follow up of sanitation, restoration and productivity activities																					
Surveillance and attention to illicit acts reports																					
Follow up to the biologic baseline, change of soil use, forestry plantation monitoring																					
Update the SIG																					
Activity 2.1.5: Undertake social assessment of pilot area communities through qualitative and quantitative sampling techniques																					
Use of the project's evaluation methods																					
Reports countersigned by authorities																					
Polls																					
Participatory advance workshops																					
Local authorities evaluation letters																					
Assessment of the obtained results against the planed activities																					

ACTIVITIES	YEAR 1			YEAR 2			YEAR 3			YEAR 4			YEAR 5			YEAR 6			YEAR 7			
Establish Steering Committee																						
Train and familiarize project staff with project log frame and expected results																						
Activity 3.1.2 Undertake a thorough institutional evaluation																						
Activity 3.1.3 Adapt project strategy and management accordingly																						
Determine outreach points for replication work in the other two surrounding states (Guanajuato and Hidalgo)																						
Evaluate staff capabilities for phase II																						
Revise TORs and reinforce staff structure for phase II																						
Establish new field offices in other sites																						
3.2 Training /Technical assistance																						
Activity 3.2.1: Develop and implement a training/ technical assistance plan																						
Train expanded project team in political negotiation and conflict resolution																						
Targeted training of professional staff in business and environmental strategic planning and management																						
Train project team members in project management, strategic planning, negotiation techniques and environmental management																						
Targeted training in environmental law and land tenure conflict resolution																						
Targeted training in community development and consensus building techniques																						
Activity 3.2.2: Continue training as necessary to develop management, negotiation and conflict resolution capacities																						
Activity 3.2.3: Develop and implement plans for training of local capacities (beyond initial pilot site communities)																						
Write up the local capacities development plan																						

ACTIVITIES	YEAR 1			YEAR 2			YEAR 3			YEAR 4			YEAR 5			YEAR 6			YEAR 7			
Develop teaching materials																						
Establish activities program with the different networks																						
Permanent training in the development of self sufficiency and productive diversification abilities																						
Interchange of successful experiences																						
Institutional strengthening for local initiatives within the Reserve																						
Activity 3.2.4: Train/ re-engineer project staff, for phase II																						
3.3 Institutional strengthening, inter-institutional co-ordination and mainstreaming																						
Activity 3.3.1: Strengthen the Technical Advisory Committee (TAC) to transform it into a regional planning and Co-ordination Committee																						
Analysis of opportunities																						
Development of the work program																						
Proposal write up and fund raising																						
Training to institutional staff within the Reserve																						
Negotiation visits to intermunicipal and interested institutions																						
Implement the Reserve's Management Plan at the bioregional level promoting mainstreaming in the four surrounding states																						
Develop and monitor an annual operational plan and budget for inter-institutional co-operation among TAC members, promoting institutional support and re-channeling of monetary funds																						
Establishment of evaluation sub-committees																						

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Technical field visits within the region and immediate surrounding areas	■	■	■	■	■	■	■
Activity 3.3.2: Expand TAC participation by involving the government of San Luis Potosi and the municipality of San Joaquin in the first year	■	■					
Activity 3.3.3.:Design an undertake a campaign in support of the TAC to build conservation awareness among public servants and technical advisors to enable re-orientation of public policies and redefinition of public works in the four surrounding states.	■		■		■		
Visits to successful sustainable experiences		■		■		■	
Organization of permanent concientization events		■		■		■	
Permanent dissemination of materials		■		■		■	
Activity 3.3.4: Form and strengthen community level committees to implement and monitor conservation and sustainable use initiatives in all pilot areas	■	■	■	■	■	■	■
Develop and monitor 5 site-specific development plans to be revised in a yearly basis	■	■	■	■	■	■	■
Execute capacity development plans for target communities in 5 pilot areas	■	■	■	■	■	■	■
Activity 3.3.5: Evaluate and reinforce mainstreaming mechanisms and expand their focus to two other states (<i>Guanajuato</i> and <i>Hidalgo</i>) to attain integral coverage of influencing activities and policies					■	■	
Activity 3.3.6: Expand TAC focus and participation by involving the state governments of Guanajuato and Hidalgo in the 4 th year in site-specific replication activities					■	■	
Activity 3.3.7: Form and strengthen community level committees and grassroots organizations beyond pilot sites in the four surrounding states.					■	■	■
Organize participatory diagnostic workshops					■		
Detection of ONGs, community committees					■		
Interchange visits						■	■
Training in sustainable strategies and organization of community actions						■	■

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Activity 3.3.8: Co-ordinate second-tier actions, re. watershed management and water services with the government of San Luis Potosi and CNA, carbon sequestration and carbon bond market development with the Office of Climate Change at INE							
Activity 3.3.9: Support INE to disseminate and replicate TAC functioning as a co-ordination and mainstreaming committee							
3.4 Conservation and rehabilitation Activity 3.4.1: Protect and rehabilitate key watershed areas at <i>Pinal de Amoles</i> and Arroyo Seco							
Surveillance and attention to illicit acts reports							
Localization of threatened properties							
Negotiation with communities							
Signature of agreements							
Rental of 2000 has of threatened land							
Meetings with communities of the areas to rehabilitate to obtain their involvement in the reforestation program							
Committee integration and signature of agreements							
Fortnightly meetings with the reforestation committee							
Purchase of the necessary materials for reforestation							
Plant production							
Execution of the work							
Supervision and evaluation							
Soil management. Annual construction of 14,000 M ³ of terraces and 1,500 M ³ of anti erosion dams							

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Integration of work committees							
Execution of the work							
Activity 3.4.2: Undertake basic conservation and biodiversity protection activities in 5 identified key core areas (<i>Pinal de Amoles, Joya del Hielo, Cañada de las Avispas, Misión de Bucarelli</i> and <i>Ayutla</i>) involving two of the four surrounding states (<i>Queretaro</i> and <i>San Luis Potosi</i>)							
Promote land use regularization and enforcement							
Employ and train the Reserve's Inspector ready for its official validation by PROFEPA							
Development of a comprehensive program for processes regulation							
Establish voluntary participation and community participatory civil surveillance conservation brigades in 70 communities							
Selection of members as community rangers							
Validation of the rangers by PROFEPA							
Meetings to present the rangers to the community							
Training of the community rangers							
Community rangers operational organization							
Continuity to illicit acts reports							
Surveillance rounds							
Sanitation campaigns organization							
Domestic reforestation at communities							

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Supervision and evaluation							
Establish biodiversity conservation control facilities							
Support PROFEPA officers undertake mandatory audits of forest exploitation quotas, illegal hunting, provoked fires, illicit route opening							
Control and support enforcement of regulations on slash and burn agricultural practices							
Radio broadcasting							
Elaborate didactic material							
Painting of murals							
Painting of large signs							
Community meetings							
Follow up legal prosecutions to guarantee dissuasive enforcement							
Attention to illicit acts reports							
Continuity to the punishment of illicit acts							
Organization of surveillance rounds							
Activity 3.4.3: Protect the 4 identified north-south biological corridors							
Agreement meetings with communities for the protection of corridors							
Surveillance rounds and special rounds							
Auditing of forestry exploitation							

ACTIVITIES	YEAR 1			YEAR 2			YEAR 3			YEAR 4			YEAR 5			YEAR 6			YEAR 7		
Evaluation																					
Painting of signs for the protection of flora and fauna																					
Sign placing																					
Activity 3.4.4: Rent or purchase critical areas to guarantee strict conservation																					
Identification of plots																					
Rounds for the physical identification of properties and to establish boundaries																					
Meetings and negotiation with owners of threatened sites or important land for conservation																					
Writing of proposal																					
Meetings and presentations before different corporations and interested people																					
Legal advice for the regulation of properties																					
Purchase of 2,100 has of land for conservation																					
Supervision and evaluation																					
Monitoring and surveillance of the area																					
Activity 3.4.5: Establish a carbon storage pilot project in 1,000 hectares of old forests																					
Search of options through an international consultant																					
Development of proposal by consultant																					
Negotiation with owners																					

ACTIVITIES	YEAR 1			YEAR 2			YEAR 3			YEAR 4			YEAR 5			YEAR 6			YEAR 7		
Signature of agreements																					
Supervision and evaluation																					
Surveillance and monitoring of the area																					
Activity 3.4.6: Establish natural regeneration areas in selected sites covering 2,000 hectares																					
Identification of properties																					
Census of owners taking part																					
Meetings with communities taking part (further localization of properties)																					
Management of natural regeneration areas, fencing and thinning																					
Field rounds																					
Materials and incentives delivery to partakers																					
Supervision and evaluation																					
3.4.7: Rehabilitate 500 hectares in key zones every year																					
Identification of properties																					
Census of owners taking part																					
Meetings with communities taking part (further localization of properties)																					
Management of natural regeneration areas, fencing and thinning																					
Field rounds																					

ACTIVITIES	YEAR 1			YEAR 2			YEAR 3			YEAR 4			YEAR 5			YEAR 6			YEAR 7			
Materials and incentives delivery to partakers																						
Supervision and evaluation																						
Activity 3.4.8: Disease and pest control and combat																						
Design of the pine debarking pest control program																						
Execution of the work																						
Supervision and evaluation																						
Activity 3.4.9: Establish agreements to guarantee water availability for flora and fauna																						
Agreements with CNA to guarantee water overflow at supplying springs																						
Agreements with communities																						
Financial support negotiation for the excavation of rain collecting ponds																						
Supervision and evaluation																						
Activity 3.4.10: Promote the definition and enforcement of urban management, building Norms and regulations safeguarding scenic integrity within the Reserve																						
Action taking with municipal government																						
Elaboration of urban development plans																						
Elaboration of leaflet to promote ecological housing																						
Promotion of leaflet																						
Supervision and evaluation																						

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7									
Activity 3.4.11: Implement a home-based demonstrative energy efficiency programme and promote the setting up of 600 efficient wood-burning cooking stoves	■	■	■	■	■	■										
Meetings with interested communities	■															
Purchase of materials and construction of rural stoves		■			■			■								
Supervision			■		■				■							
Activity 3.4.12: Develop and apply pilot recuperation schemes for environmental services		■	■	■	■	■	■	■	■	■						
Evaluation of the environmental services				■	■											
Establishment of priority zones		■	■													
Community negotiation and permanent surveillance			■	■	■											
Conservation recuperation monitoring				■	■	■	■	■	■							
Negotiation for the sale of environmental services				■	■			■	■	■	■					
Activity 3.4.13: Develop integrated ecosystem management models that conserve biodiversity and sequester carbon in selected areas				■	■	■	■	■	■							
Properties inventory				■	■	■	■	■	■							
Elaboration of agreements				■	■	■	■	■	■							
Design of carbon sequestration proposal				■	■	■	■	■	■							
Interinstitutional negotiations of the proposal				■	■	■	■	■	■							

ACTIVITIES	YEAR 1			YEAR 2			YEAR 3			YEAR 4			YEAR 5			YEAR 6			YEAR 7		
Approval of environmental impact studies by corresponding authorities																					
Employment of staff to cut the breaches																					
Negotiation with communities																					
Execution of the work																					
Employment of staff to maintain the breaches																					
Supervision and evaluation																					
Activity 3.5.5: Establish, train and create an effective incentive scheme to 10 volunteer fire prevention corps and 4 fire control brigades in high risk areas																					
Meetings with communities to form voluntary brigades																					
Integration of brigades																					
Training of brigades																					
Fortnightly meetings with the prevention and fire control committee																					
Equipping																					
Continuity to actions undertaken by the SEMARNAT and the State Government brigades																					
Supervision and evaluation of actions																					
Activity 3.5.6: Establish an awareness campaign to prevent fire usage in key communities of the four surrounding states																					
Activity 3.5.7: Expand fire control and prevention assets to the states of <i>Guanajuato</i> and <i>Hidalgo</i> and to the northern border of the Reserve with the state of <i>San Luis Potosi</i>																					

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Activity 3.6.2: Update and strengthen a multifaceted database and a geographic information system (GIS) at the site level to inform management decisions and a regular monitoring programme based on information management	■	■	■	■	■		
Activity 3.6.3: Co-ordinate with CONABIO to acquire and update information generated by the national GIS and the national system of biodiversity information Agreements with CONABIO to access the national system of biodiversity information		■	■				
Activity 3.6.4: Develop and implement a monitoring system on community participation, community empowerment and life quality improvement	■	■	■	■			
Activity 3.6.5: Synthesize environmental and socio-economic information for decision making and diffusion purposes	■	■	■	■			
Activity 3.6.6: Elaborate a progress report towards sustainability at the end of year 4				■	■		
Activity 3.6.7: Update the biological, ecological, social and economic databases to monitor project conservation patterns and impact					■	■	■
Activity 3.6.8: Continue acquiring and updating information to GIS and ensuring linkage with CONABIO's biodiversity monitoring and evaluation system (SNIB)					■	■	■

OUTPUT 4: Financial sustainability of Reserve management is assured

4.1 Strengthening of saving and sustainability fund		■	■														
Activity 4.1.1: Designate and constitute a business and finance advisory committee to outlook and support business management of service packages offered by GESG and FRMU		■	■														
Design and presentation of studies of strategies as tools for the financial support of conservation actions		■															
Meetings to evaluate and update processes		■		■		■		■									
Activity 4.1.2: Strengthen GESG and FRMU business capacities through assignment of business experts and consultants per line of service		■	■	■	■	■	■	■									
Employment of advisors		■	■														
Advise on the development of processes of comprehensive projects		■	■														
Activity 4.1.3: Develop business strategy for community brokerage, producers co-ordination and technical assistance designed to link private enterprises with small holders in high yield forestry plantations in degraded areas, negotiating profit sharing contracts for plantation yield and finished products resulting from this yield (this relates to the activity 5.1.2)		■	■														

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Training							
Equipping							
Marketing							
Supervision and evaluation							
Activity 5.1.4: Promote the creation and business consolidation of associations and strategic partnerships among forest smallholders through brokerage and conflict resolution methods							
Activity 5.1.5: Develop demonstrative initiatives of processing and commercialization of timber sub-products in top timber producing areas							
Activity 5.1.6: Establish 1 pilot sustainable commercial management project of highly valued <i>cycades</i> , for the national market							
Undertake the necessary studies to establish UMAS							
Registration of the UMA before the INE							
Training							
Construction of facilities							
Marketing of the products							
Evaluation							
Activity 5.1.7: Establish 1 pilot sustainable commercial management project of <i>white-tailed deer</i> for the national market							
Undertake the necessary studies to establish synergetic UMA							
Community organization							

ACTIVITIES	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		YEAR 6		YEAR 7	
Elaboration of resource proposal														
Construction and equipment of facilities														
Promotion and marketing of the resource														
Continuity and supervision of the project														
Replication in other areas of the reserve														
Activity 5.1.8: Develop demonstrative commercial sustainable management of non-timber products like <i>damiana</i> , <i>oregano</i> , <i>pine-nut</i> , and <i>bay leaf</i> in semi-desert pilot areas														
Employment of experts														
Localization of plots														
Community meetings														
Regularization of productive processes of forestry non timber products														
Fencing of areas for regeneration														
Establishment of good management pilot projects														
Training														
Restoration actions														
Marketing														
Activity 5.1.9: Develop analogue forestry plantations, re: <i>palms</i> , <i>mushrooms</i> , <i>medicinal plants and forest fruits and butterflies</i> in temperate forest pilot areas														
Botanical studies														

ACTIVITIES	YEAR 1			YEAR 2			YEAR 3			YEAR 4			YEAR 5			YEAR 6			YEAR 7		
Supervision and evaluation				■	■	■	■	■	■	■	■	■									
Activity 5.2.4: Establish an ornamental bird's production centre for commercial purposes, re. <i>Agapornis, ninfa, cabrita, canárica (canary), codorniz (quail) and perdiz (pheasant)</i>				■	■	■	■	■	■	■	■	■									
Employment of expert to design the project				■	■																
Organization of the community				■	■																
Technical files and funds negotiation				■	■																
Market studies				■	■																
Implementation of the project by the expert					■	■	■	■	■	■	■	■									
Construction and equipping of the facilities					■	■		■	■												
Training course to the community					■	■		■	■												
Execution of the project by the community					■	■		■	■												
Advise					■	■		■	■												
Marketing								■	■	■	■	■									
Supervision and evaluation				■	■	■	■	■	■	■	■	■									
Activity 5.2.5: Evaluate financial performance of newly established enterprises to adapt replication strategy Evaluation of financial development of productive projects for their replication in other areas and adaptation of proposals													■	■	■						
Activity 5.2.6 Plant 15,000 fruit trees for commercial purpose outside pilot areas and promote massive replication financed by other agencies, especially SAGAR and SEDESOL and by market forces													■	■	■	■	■	■	■	■	■

ACTIVITIES	YEAR 1			YEAR 2			YEAR 3			YEAR 4			YEAR 5			YEAR 6			YEAR 7		
Community organization																					
Project design																					
Fund negotiation before dependencies for infrastructure and signature of co- responsibility agreements for the projects																					
Construction and installation of infrastructure																					
Meetings with communities to plan the projects in order to strengthen their capacity to offer tourist services																					
Operation of the project																					
Monitor the development and results of the training																					
Elaboration of the regulations manual																					
Activity 5.3.2: Demarcate the 8 eco-tourism routes provided with facilities of environmental awareness building and interpretation																					
Conditioning of footpaths																					
Demarcation																					
Training of tourist guides																					
Maintenance of footpaths to keep them in good order																					
Activity 5.3.3: Demarcate 2 defined routes for cyclists in collaboration with local authorities																					
Activity 5.3.4: Establish and demarcate 2 routes for bird watchers																					
Activity 5.3.5: Evaluate business performance in terms of client satisfaction and financial profitability of community operated eco-tourism to adapt strategy for phase II																					
Activity 5.3.6: Appraise initial currently capacity of eco-tourism after phase I and adapt strategy accordingly																					

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Monitoring and evaluation							
Activity 5.4.4 Implement an integrated pilot programme of fruit gardening, planting 25,000 fruit trees for commercial purposes and establishing 3 fruit processing plants							
Activity 5.4.5 Undertake a socio-economic and a business evaluation to adapt strategy							
Activity 5.4.6 Promote institutional investments in low-risk locations in the four surrounding states to ensure alternative livelihoods							
Localization of diversification opportunities							
Meetings							
Elaboration of proposals							
Funds negotiation							
Nomination of committees							
Execution of the work							
Supervision and evaluation							
5.5 Water supply, waste management and sanitation Activity 5.5.1: Design and establish a demonstrative program of building and community management of rainwater reservoirs in 5 pilot communities							
Selection of communities							
Negotiations before de communities and possible funding sources to establish rain water catchment projects							
Construction of rain collecting ponds							
Execution of the project							

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Supervision and evaluation							
Activity 5.5.2: Promote water management practices for domestic and productive use							
Production of materials							
Radio broadcasting							
Technical demonstration							
Establishment of pilot project to catch rain water							
Activity 5.5.3: Implement an extensive solid waste management plan in collaboration with communities and local authorities							
Development of proposal together with the communities							
Establishment of agreements with municipal agencies to relocate garbage dumps and the closure of existing ones							
Localization of the right sites							
Environmental impact studies							
Development of the executive project							
Negotiation of interinstitutional funds							
Construction, conditioning and equipping							
Training of staff on the right management							
Monitoring the right management							
Construction of 43 recycling materials centers to be integrated to a net of 57 centers already in operation							

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Activity 5.5.4: Permanent campaign of waste management in 150 communities in pilot areas							
Promotion of meetings with community authorities							
Meetings take place							
Recyclable materials campaigns							
Sorting of materials							
Transport of the materials to the local centers							
Transport of the materials to the regional center							
Preparation of materials like pressing and bundling							
Delivery of materials to the processing plant							
Distribution of incentives to schools and communities							
Supervision and evaluation							
Activity 5.5.5: Permanent participatory community cleaning campaigns in pilot areas							
Meetings to organize campaigns with communities in pilot areas							
Purchase of necessary materials for the campaigns							
Execution of the campaigns (Collection and transport or burial of materials)							
Supervision and evaluation							
Activity 5.5.6: Promote community participation to set-up up 2,800 ecological sanitation facilities in key municipalities and urban settlements							

ACTIVITIES	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		YEAR 6		YEAR 7	
Promotion meetings														
Gathering of requests														
Interinstitutional negotiations														
Training the authorities and communities on the construction of the facilities														
Distribution of the information material														
Project execution														
Training of the right management														
Supervision														
Activity 5.5.7: Promote proper design and installation of 4 municipal dumps within the reserve and re-location 2 other ones														
Negotiations with municipal authorities														
Localization of sites														
Employment of experts for the elaboration of executive projects														
Interinstitutional negotiations														
Purchase of plots														
Elaboration of the justification of environmental impact														
Construction														
Operation														

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Supervision and guidance	■	■	■	■	■		
Activity 5.5.8: Promote community operation of 100 recyclable materials stock centers	■	■	■	■			
Activity 5.5.9: Undertake qualitative and quantitative performance evaluation and refine models and proposed technologies					■	■	■
Adjustment of proposal					■	■	■
Activity 5.5.10 Support communities to set up 25 rainwater reservoirs and to replicate the experience with the collaboration of local or state authorities					■	■	■
Activity 5.5.11: Promote multiplication of demonstration activities in new locations outside pilot areas, via field visits, workshops, distribution of extension service materials					■	■	■
Promotion in other areas of replication of projects through field visits, community meetings and dissemination materials					■	■	■
Interinstitutional coordination					■	■	■
Interchange of experiences						■	■

OUTPUT 6: An environmental education and public awareness campaign is undertaken

6.1 Reserve's biological richness and experience dissemination – Related to 4.1.5	■	■	■	■	■	■	■	■	■	■							
Activity 6.1.1: Design and implement a dissemination program of the Reserve's biological riches and environmental services at the local, state, national and international level including participation in international <i>fora</i> and development of marketing materials ranging from videos, photographic publications to technical information folders	■	■	■	■	■	■	■	■	■	■	■						
Activity 6.1.2: Implement a training program for other national NGOs to enable effective replication at the local level		■	■	■	■	■	■	■	■	■	■						
Detection of NGOS in influence zones		■															
Elaboration of activities program		■	■														
Permanent travelling presentation			■														
Interchange of experience			■	■	■	■	■	■	■	■	■						

ACTIVITIES	YEAR 1			YEAR 2			YEAR 3			YEAR 4			YEAR 5			YEAR 6			YEAR 7		
Support at special events																					
Promotion of “Training for Sustainability” services to other Reserves and NGOS in influence zones																					
Implementation of the program to offer training and guidance to other NGOS, dependencies and institutions in order to achieve an effective replication in influence zones																					
Activity 6.1.3: Undertake a promotion and experience sharing campaign to disseminate the pilot co-management model experience and achieved results among other NPA, at the national and international level																					
Elaboration of the training program																					
Production of materials																					
Organization of workshops																					
Implementation of the program to offer training and guidance to other NPAS in order to achieve an effective replication in other areas																					
Staff exchange																					
6.2 Environmental education campaign Activity 6.2.1: Carry out an environmental education program imparted by GESG in collaboration with formal education institutions, attaining a regular audience of 17,000 students in 150 communities within the reserve																					
Training of the environmental education team																					
Elaboration of annual work programs																					
Production of teaching materials																					
Presentation of the environmental education program to the regional ministry of education office																					
Development of the program with students, teachers and parents																					
Monthly visits to 250 schools in 150 communities to implement the program																					

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Supervision and evaluation							
Activity 6.2.2: Facilitate workshops addressed to local teachers in 200 local schools							
Design of workshops' content							
Production of materials							
Invitation and promotion							
Organization with education authorities							
Execution of workshops							
Evaluation of workshops							
Activity 6.2.3: Carry out an adult environmental education program, attaining a regular audience of 22,500 people							
Prepare the dissemination strategy							
Murals							
School and domestic reforestation of 100,000 trees every year							
Cleaning campaigns							
Movie club shows							
Community work days							
Community meetings							
Organization of education, reforestation and sanitation actions							

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Activity 6.2.4: Establish an environmental education center in <i>Jalpan de la Sierra</i> provided with proper facilities and equipment							
Project design							
Interinstitutional negotiations							
Construct and equip the center							
Operate the center							
Supervise and evaluate							
Activity 6.2.5: Design and implement an environmental education program aimed at promoting voluntary participation and at consolidating and training a permanent environmental broker force							
Contact community links							
Integrate links and promoter networks within the area							
Training of links, surveillance brigades, reforesters, promoters, etc							
Promote and coordinate actions in the communities							
Measure the development of the actions undertaken by links							
Measure the impact of their actions							
Activity 6.2.6: Co-ordinate the organization of 24 Environment Festivals per year, in collaboration with local communities							
Design of announcement							
Delivery of announcement and invitation to the schools and communities where the environmental education program takes place							

ACTIVITIES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
Celebration of the “Fiestas de la Tierra”							
Supervision, record taking and evaluation of the festivals							
Activity 6.2.7: Develop and transmit a radio program 4 times per week in four radio stations (regional and state) reaching an audience of 50% of Reserve inhabitants							
Elaboration of the plan of themes to be broadcasted							
Elaboration of the proposal							
Fund negotiation							
Negotiation of spaces and the radio stations							
Agreements							
Purchase of the necessary equipment and materials							
Production of the radio programs							
Broadcasting of the programs							
Supervision							
Activity 6.2.8: Promote the constitution of environmental groups and NGOs in the area and influence zones, providing mechanisms and technical assistance							
Localization of groups and NGOS already in existence							
Census							
Announcement of the meeting							
Meetings for the selection of groups							

Annex G: Terms of Reference For Project Personnel

POSITION: DIRECTOR GENERAL

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

A. The Director General shall be accountable for the:

- 1) Overall management to meet the Project outputs and objectives.
- 2) Overall management of resources of the Project.

B. The Director General shall be responsible for:

- 1) Chairing the Federal Reserve Management Unit (FRMU) that will supervise basic conservation, inspection and enforcement activities within the Reserve.
- 2) Ensuring achievement of Project's objectives in compliance with the Reserve Management Programme.
- 3) Chairing the Steering Committee that will meet on a quarterly basis with the role of overseeing project planning, implementation and performance. 3.1.1 b, 3.1.2 and 3.1.3
- 4) As its Technical Secretary, convening the meetings of the Technical Advisory Committee, chaired by the State of Queretaro government authorities.
- 5) Chairing the Management Committee, supervised directly by the FRMU and the GESG, that will be responsible for work programming, designing of Project policies and strategies, monitoring, financial management and procurement preparations.
- 6) Constituting and forming part of a business and finance advisory committee to outlook and support business management of service packages offered by GESG and FRMU. 4.1.1
- 7) At the conclusion of Phase I and based on a thorough institutional evaluation, discussing in the Steering Committee, the adaptation of Project strategy and management accordingly: 3.1.3
 - a) Determine outreach points for replication work in the other two surrounding states (Guanajuato and Hidalgo).
 - b) Evaluate staff capabilities for Phase II
 - c) Revise TORs and reinforce staff structure for Phase II
 - d) Establish new field offices in other sites.
- 8) Ensuring financial sustainability of the Project, with the support of the business and finance advisory committee.
- 9) Supervising the implementation of the annual and quarterly work plans of the Coordinations and Units.
- 10) Ensuring synergy among the activities of all the technical areas.
- 11) Reviewing with UNDP the annual and quarterly work plans and technical and financial reports, according to UNDP Manual for Nationally Executed Projects.

- 12) Submitting the annual operational programmes (POA) to the government, prepared by the Political Alliances Coordinator.
- 13) Supporting, in coordination with the Monitoring and Evaluation (MEC), the external evaluation missions.
- 14) Submitting to the donors, government authorities, GEF and UNDP the technical reports prepared under the coordination of the MEC.
- 15) Submitting to potential donors project proposals elaborated under the coordination of the MEC by the technical areas.
- 16) Acting as facilitator or trainer in areas of his/her knowledge, as required.
- 17) Applying UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 18) Defining the publications criteria for all material and documents produced by the Project.
- 19) Overseeing the application of the archives criteria in maintaining the files of the Direction.

C. The Director General, following UNDP guidelines and procedures, shall perform the following duties:

- 1) Coordinate and supervise the work of the following personnel, to ensure compliance with their work plans and achievement of Project outputs:
 - a) coordinators
 - b) units chiefs
 - c) advisors
 - d) officers
- 2) Participate in the UNDP contracts committee to select the coordinators and the subcontracts over US\$30,000.

Selection Criteria:

DG				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
<p>Environmental engineering, agronomy, pedagogy, sociology and/or ample knowledge on environmental matter, reforestation and sustainability</p> <p>Preferably post-graduate degree in natural resource management or equivalent 10 years professional experience.</p>	<ul style="list-style-type: none"> * Resource mobilization * Knowledge of and experience with implementing donor funded environmental projects * Experience in design, evaluation and implementation of conservation/ resource-management projects * Environmental conservation and sustainability * Environmental project managing * Environmental negotiation * Communitarian work * Relation with governmental agencies and civil society organizations * Socioeconomy and geography of the Reserve * Excellent English 	<ul style="list-style-type: none"> * Ability to effectively co-ordinate a large, multi-disciplinary project * Adequate use of numbers * Excellent use of language * Ability to write reports and express him/herself in Spanish * Follow up of work plan and goals * Positive and open leadership * Management by objectives * Needs detection and decision making * Establishment of long, short and medium term goals * Negotiation and conflict resolution * High initiative * Personnel managing * Strategic planning * Promotion and sales * High ability to relate with people of any level and representation * Speech 	<ul style="list-style-type: none"> * Fully committed * Honest, great thrust and initiative * Charismatic * Convincing, congruent * Adaptable * Empathic * Highly responsible 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Availability to continuously travel through the Reserve, Queretaro and México City * Availability to travel abroad * Selection through UNDP contracts committee

POSITION: ASSISTANT TO THE DIRECTOR GENERAL (ADG)

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

A. Under the supervision of the Director General, the ADG shall perform the following duties:

- 1) Prepare his/her annual and quarterly work plans to be approved by the Director General.
- 2) Prepare quarterly reports on the results of the area under his/her responsibility.
- 3) Support the Sustainable Production Chief in the processes to rent or purchase land in critical areas to guarantee strict conservation.
- 4) Monitor, on a permanent basis, the core zones, areas with high biological value, land devoted to conservation (either rented or purchased) to report irregularities, potential problems or needs to the corresponding technical areas for their action.
- 5) Based on the results of the permanent monitoring, identify lack of information to submit it to the Reports and Studies Chief, for inclusion in the research to be carried out.
- 6) Draft the institutional memory of the Sierra Gorda Reserve, based on oral and written information gathered in the communities, related to wildlife, history, conservation works, etcetera.
- 7) Support the Research and Studies Chief (RSC) in the preparation of research findings and project results for publication and dissemination outside pilot areas and abroad (Phase II). 2.1.9
- 8) Support the RSC to:
 - a) Gather existent relevant research on the Reserve natural resources status and dynamics, to ensure proper baseline assessments. 2.1.1
 - b) Update comprehensive baseline on biodiversity and establish a monitoring system on recuperation, conservation and change in land use. 2.1.2
- 9) Prepare technical justifications for the influence zones to be re-categorized within the Natural Protected Areas System.
- 10) Draft documents related to technical aspects of the biodiversity management of the Reserve.
- 11) Represent the Reserve at fora, workshops, etcetera, as required.
- 12) Plan *ad hoc* routes for high-level guests or potential donors visiting the Reserve and accompany them.
- 13) Edit all documents, reports, bulletins, etcetera produced in the Project.
- 14) Form part of the following committees: local contracts and procurement.
- 15) Apply UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 16) Act as facilitator or trainer in areas of his/her knowledge, as required.

- 17) Apply the publications criteria in all material and documents produced by him/her.
- 18) Follow the archives criteria when creating and maintaining the information generated by him/her.

Selection Criteria:

ADG				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
<p>Biology, sociology, anthropology, environmental engineering</p> <p>Ten-year experience in the field</p>	<ul style="list-style-type: none"> * Diagnose and research of natural resources * Economic valuation of natural resources and environmental services * Biodiversity recuperation and conservation * Research and/or biodiversity inventory making * Social and economic change in Reserve areas * Communitarian organization * Database utilization * Technical computer programmes * Publishing previous investigations * Contact with the academia and universities sector and three levels of government * Very good knowledge of English (reading, writing and speaking) 	<ul style="list-style-type: none"> * Attention to detail * Problem synthesis and analysis * Information integration * Close follow up of work plan and goals * Fair use of numbers and statistics software * Excellent ability to write reports and express him/herself in Spanish * Under pressure work tolerance 	<ul style="list-style-type: none"> * Good relations with people * Constant * Committed * Responsible * Adaptable * Honest, great thrust and initiative * Convincing, congruent 	<ul style="list-style-type: none"> * Live in Jalpan or surrounding areas * Availability to continuously travel in the Reserve. * Selection through UNDP contracts committee

POSITION: RESOURCE MOBILIZATION UNIT CHIEF (RMUC)¹

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

- A. Under the supervision and approval of the Director General, the Chief of the RMUC shall be responsible for:
- 1) Designing and implementing a resource mobilization strategy with clearly defined targets to be approved by the Steering Committee.
 - 2) Preparing the annual and quarterly work plans of the Unit to be approved annually by the Steering Committee.
 - 3) Identifying opportunities in national or international fora to make contacts, negotiate sources of funding, create alliances with private sector, foundations, corporate institutions, etcetera.
 - 4) Permanent lobbying with the contacts made to increase their interest in the Reserve and to ensure obtaining resources and strategy to give continuity to the connection.
 - 5) Preparing relevant information for national and international potential donors to increase awareness and interest on the priority status of the region as well as to know and appreciate the grass root strategy of the GESG.
 - 6) Preparing the following material for each trip, within the country and/or abroad, aiming at mobilizing financial resources:
 - a) Detailed agendas and contacts lists.
 - b) Back-to- office report to inform on the agreements made, the donor´s requirements for financing and the follow-up activities.
 - c) Plan of actions regarding preparation of new project proposals to be formulated in coordination with the Monitoring and Evaluation Coordinator (MEC) and the corresponding technical area.
 - 7) In coordination with the MEC, supporting the technical areas in the preparation of project proposals, to ensure inclusion of donor´s requirements.
 - 8) Supporting the DG in tours, special events, presentations and fund raising trips.
 - 9) Presenting the proposals to the donors and following them up until approved, at which time the corresponding technical area will take over, together with the Administration Coordinator who will ensure timely reception of committed funds.
 - 10) Participating in the meetings of the Management Committee, as required, to discuss the resource mobilization strategy, follow up the work plan and ensure synergy with the Political Alliances Coordination (PAC).
 - 11) Meeting frequently with the PAC to discuss the inter-institutional networking and communication, advocacy and negotiation among the state governments involved in the Project and their agencies at the municipal level and to decide on lines of action.

¹ Based in the Querétaro City office.

- 12) Meeting frequently with the Public Relations Unit Chief to ensure coordination among promotional activities and high quality of promotional material.
- 13) Obtaining the DG authorization for all expenses derived from the fulfillment of his/her work plan.
- 14) Under the coordination of the MEC, preparing the needed reports of the Unit.
- 15) Creating and updating an electronic directory of a network of potential national and international donors.
- 16) Elaborating a manual of "negotiating tips" in the resource mobilization field.
- 17) Acting as facilitator or trainer in areas of his/her knowledge, as required.
- 18) Applying UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 19) Applying the publications criteria in all material and documents produced in his/her area.
- 20) Following the archives criteria when creating and maintaining the information generated in his/her area.

The RMUC shall receive from the PRUC the administrative and logistic support needed to perform his/her duties on time and meeting high-quality standards.

Selection Criteria:

RMUC				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
<p>Economy, international relations, public relations, business administration and/or ample knowledge in resource mobilization and financial sources.</p> <p>Five years of proven experience</p>	<ul style="list-style-type: none"> * Socioeconomy and geography of the Reserve * Finance * Resource search and handling * Strategic planning * Report elaboration for: governmental authorities, donors and international organizations * Fluent English and knowledge of another language desirable 	<ul style="list-style-type: none"> * Managing by objectives without close supervision * Establishment of long, medium and short term goals * Negotiation and conflict resolution * Information synthesis * Close and constant follow up of work plan and goals * Organization * Excellent use of oral and written language * Ability to write reports and express him/herself in Spanish * Business sense * To mobilize and coordinate people * Speech * Diplomat, prudent 	<ul style="list-style-type: none"> * Self motivated * Highly committed * Responsible * Honest, great thrust and initiative * Convincing, congruent * Adaptable * Charismatic 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Availability to continuously travel in the Reserve, Queretaro and México City * Availability to travel abroad * Selection through UNDP contracts committee

POSITION: PUBLIC RELATIONS UNIT CHIEF (PRUC)²

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

A. Under the supervision and approval of the Director General (DG), the PRUC shall be responsible for:

- 1) Designing and implementing a public relations strategy with clearly defined targets.
- 2) Preparing the annual and quarterly work plans of the Unit.
- 3) Ensuring timely and adequate organization of all national special events outside the Reserve area, building of institutional image and publication of the promotional materials required by the Unit and the technical areas.
- 4) Maintaining excellent relations with national and international media (press, radio, television): organizing press conferences, sending press releases and relevant information on the Reserve activities, etcetera.
- 5) Ensuring an adequate flow of information at national and state levels to increase awareness and interest in the sustainable activities being carried out in the Reserve.
- 6) Disseminating the news bulletin of the Reserve and of the GESGIAP in the country and abroad, as appropriate.
- 7) Convening, organizing and attending the meetings of the group GESGIAP Friends.
- 8) Supporting the DG in the follow up of actions in the area of public relations.
- 9) Preparing and maintaining the WEB page.
- 10) Representing the GESGIAP in the environment and water citizen councils.

B. Under the supervision and approval, as required, of the Administration Coordinator (AC), the PRUC shall be responsible for:

- 1) Administering, the office in Queretaro City applying UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 2) Ensuring timely delivery of all promotional and educational material produced in the cities of Queretaro or Mexico.
- 3) Preparing multi-media presentations to be utilized in the promotion of the Reserve and the activities of the Project by the DG, PAC, RMUC, PRUC, etcetera.
- 4) Ensuring application of publications criteria in all Project's material.
- 5) At the request of the Coordinators, making appointments for them in the City of Queretaro.

² Based in the Queretaro City office.

- 6) Supervising and coordinating the work of the administrative staff based in the Queretaro office (graphic designer, administrative assistant).
- 7) Creating and updating an electronic directory of media contacts and suppliers.
- 8) Acting as facilitator or trainer in areas of his/her knowledge, as required.
- 9) Applying the archives criteria in the maintenance of the files and documentation in the Queretaro office.

The PRUC shall provide the RMUC the administrative and logistic support needed to perform his/her duties on time and meeting high-quality standards.

Selection Criteria:

PRUC				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
<p>International relations, public relations, communications, business administration, biology, sociology</p> <p>At least five years experience in the field</p>	<ul style="list-style-type: none"> * Local, state and federal governmental structure * Previous work with governmental authorities (desirable) * Contact with people of every level and studies * Public relations management * Personnel administration and management * Publicity and marketing techniques * Project's essence, objectives, highlights, etc. * Media production * Fair knowledge of English 	<ul style="list-style-type: none"> * Surroundings observation * Attention to detail * Highly organized * Managing by objectives without direct supervision * Follow up of work plan and goals * Self motivated * Excellent skills to establish interpersonal relationships * Proactive * To mobilize and coordinate people * Promotion * Negotiation * Establishment of long, medium and short term goals * Negotiation and conflict resolution * Business sense and ability to promote its development * High thrust level * Frustration tolerance * Writing reports and express him/herself in Spanish 	<ul style="list-style-type: none"> * Very responsible * Fully committed with the project objectives * Extrovert * Charismatic * Adaptable * Honest, great thrust and initiative * Convincing, congruent * Diplomatic, prudent 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Availability to continuously travel in the Reserve and Queretaro and México City * Availability to travel abroad * Selection through UNDP contracts committee

POSITION: HOLISTIC IMPROVEMENT COORDINATOR - HIC

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

A. Under the supervision of the Director General, the HIC shall be responsible for:

- 1) Preparing the annual and quarterly work plans of his/her area to be discussed in the management committee.
- 2) Participating in the meetings of the Technical Advisory Committee (TAC) for assignment of chores and coordination arrangements.
- 3) Ensuring the Training Chief:
 - a) Supports the Political Alliances Coordinator (PAC) in the development of financial sustainability tools for the training centre.
 - b) Establishes an adequate training team taking advantage, if appropriate, of the knowledge and experience of Project staff.
- 4) Participating in the meetings of the management committee to discuss the Project policies and strategies, review the work plan and ensure synergy among all the technical areas.
- 5) Convening regularly the personnel or subcontractors in his/her area to meetings to monitor and assess all the activities to be carried out to ensure compliance with their plans of action and contribution to the achievement of the Project outputs.
- 6) Authorizing the payments derived from the implementation of the work plan of his/her area.
- 7) Participating in the recruitment process of the personnel and subcontractors in his/her area, under the coordination of the Administration Coordinator.
- 8) In coordination with the Monitoring and Evaluation Coordinator (MEC):
 - a) Supporting the external evaluation activities in his/her area.
 - b) Preparing the needed technical reports of his/her area, to be submitted to the donors, government authorities, GEF and UNDP, through the Director General.
- 9) Preparing project proposals in his/her area to be submitted, by the Director General, to potential donors, with the support of the MEC and AC, and in coordination with the PAC.
- 10) Acting as facilitator or trainer in areas of his/her knowledge, as required.
- 11) Applying UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility
- 12) Overseeing the application of the publications criteria in all material and documents produced by his/her area.
- 13) Overseeing the application of the archives criteria in maintaining the files of his/her Coordination.

B. Under the supervision of the Director General, the HIC shall perform the following duties:

- 1) Detect civil society organizations (CSO) in the influence zones to propose strengthening support.
- 2) Support the activities to train and familiarize Project staff with project log frame and expected results, undertaken by the Training Chief (TC). 3.1.1.c
- 3) Supervise the development and implementation, directly or through subcontracts, of a training/ technical assistance plan for professional Project staff and/or expanded Project team including, among others, the following areas: business and environmental strategic planning and management, teaching improvement, project management, negotiation techniques and environmental law and land tenure, conflict resolution, community development and consensus building techniques, to be undertaken by the Training Chief (TC). 3.2.1, 3.2.2
- 4) Supervise the development and implementation of a training plan to upgrade local capacities in initial pilot site communities in the subjects of: sustainable forestry management; sustainable productive land uses; low impact and high yield biodiversity-friendly eco-tourism and other sustainable productive practices, to be undertaken by the TC, in coordination with the Sustainable Production Coordination, Phase II. 3.2.3 (related to 5.1, 5.2, 5.3)
- 5) Supervise the formulation of the training/ re-engineering of Project staff for Phase II, by the TC, to be discussed in the Management Committee. 3.2.4
- 6) Supervise the design and production of all needed material to implement both the in-service training for the Project personnel and the communities training, as required, responsibility of the TC.
- 7) Supervise the activities to reach output 5.5 "water supply, waste management and sanitation", to be undertaken by the Community Improvement Chief (CIC), in coordination with the Political Alliances Coordinator (PAC) and with the technical support of the subcontractor responsible for the education strategy and programme, as required, as well as the following reinforcement actions:
 - a) Negotiations with local authorities of the needed support to carry out sanitation and restoration activities in 22 communities.
 - b) Promotion of:
 - i) Social participation synergy in the communities.
 - ii) Benefits derived from the use of latrines.
 - iii) Importance to develop sustainable self-sufficient abilities.
- 8) Supervise the support the CIC and/or the subcontractor responsible for the education strategy and programme will provide to the PAC while carrying out the following actions:
 - a) Design and undertake a campaign in support of the Technical Assistance Committee (TAC) to build conservation awareness among public servants and technical advisors, to enable re-orientation of public policies and redefinition of public works in the four surrounding states. 3.3.3
 - b) Carry out all promotion and community organizing activities related to water supply, waste management and sanitation and self sufficiency models and proposed technologies (non-GEF). 5.5
 - c) Provide technical assistance and training in the context of replication of co-management best practices, and TAC enhanced functioning (this relates to services provided as part of the activity 6.1.3) (Phase II). 4.1.7
- 9) Supervise the following activities in which the subcontractor responsible for the education strategy and programme and/or the CIC will support the Sustainable Production Coordination, as needed:

- a) Form and strengthen community level committees to implement and monitor conservation and sustainable use initiatives in all pilot areas. 3.3.4
 - b) Form and strengthen community level committees and grassroots organizations beyond pilot sites in the four surrounding states (Phase II). 3.3.7
 - c) Apply demonstrative home-based energy efficiency programme and promote the setting up of 600 efficient wood-burning stoves. 3.4.11
 - d) Promote campaigns to:
 - i) Protect the two remaining east-west biological corridors (Phase II). 3.4.16
 - ii) Undertake wild fire prevention. 3.5
 - e) Develop and implement a monitoring system on community participation and empowerment, life quality improvement, reforestation and sanitation, with the support of the Monitoring and Evaluation Coordination and the Productive Diversification Chief (PDC). 3.6.4
 - f) Develop training aspects of a business strategy for community-based eco-tourism. 4.1.5
 - g) Facilitate working synergies with other networks of promoters in the region.
 - h) Carry out promotion activities of:
 - i) Commercial plantations outside pilot areas and massive replication (Phase II). 5.2.6
 - ii) Well-performed productive experiences in influence areas of the four surrounding states (Phase II). 5.2.7
 - iii) Low impact and high yield biodiversity-friendly eco-tourism management with local communities. 5.3
 - iv) Other sustainable productive practices (non-GEF). 5.4
- 10) Support the technical areas in the promotion to expand successful experiences in neighbouring states, as required. 3.3.3, 3.3.5, Phase II: 5.1.16
- 11) Support the PDC, if necessary, to increment other alternative and sustainable land uses under output 5.2.
- 12) Supervise the designing and implementation of the environmental education strategy and programme in the Reserve, to be undertaken by the hired subcontractor, with the support of the CIC and the TC. 6.2

Selection Criteria:

HIC				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
<p>Pedagogy, sociology, psychology, environmental business administration, communications</p> <p>Preferably with masters degree or 5 year experience in the field</p>	<ul style="list-style-type: none"> * Group training * Elaboration and design of didactic material for courses and workshops * Communication strategies and techniques * Communitarian work * Sustainable management * Environmental conditions of the Reserve: conservation, biodiversity and environment protection * Socioeconomy and geography of the Reserve * Very good knowledge of English (reading, writing and speaking) 	<ul style="list-style-type: none"> * Promote personnel development * Follow up of work plan and goals * Needs detection * Synthesis and planning * Attention to small details * Management by objectives * Establishment of long, short and medium term goals * Evaluation of short and long term results * Negotiation and conflict resolution * Verbal and written communication * Team work * Group and personnel management * Successful replication of previous learning experiences * Business sense and vision * Establishment of interpersonal relations * To mobilize and coordinate people * Promotion of sustainable management * Ability to write reports and clear and concise verbal expression in Spanish 	<ul style="list-style-type: none"> * Responsible * Proactive * Objective * Empathic * Committed * Learning ability * Honest, great thrust and initiative * Convincing, congruent * Adaptable 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Availability to travel in the Reserve and Queretaro State * Selection through UNDP contracts committee

POSITION: COMMUNITY IMPROVEMENT CHIEF (CIC)

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

A. Under the supervision of the Holistic Improvement Coordinator, the CIC shall perform the following duties:

- 1) Prepare his/her annual and quarterly work plans on community improvement, solid waste management and sanitation to be discussed in the planning of action meetings headed by the Holistic Improvement Coordinator.
- 2) Implement the community improvement, solid waste management and sanitation work plan in coordination with the subcontractor responsible for the education strategy and programme.
- 3) Prepare reports on the results of the area under his/her responsibility, as required.
- 4) Coordinate and supervise the tasks to be performed by the promoters in his/her area.
- 5) Undertake permanent visits in the field to monitor all actions being carried out in the communities.
- 6) Carry out planning and assessing quarterly meetings in Jalpan with the personnel under his/her responsibility, to ensure compliance with their plans of action and contribution to the achievement of the Project outputs.
- 7) Maintain close communication with the Training Chief to ensure permanent celebration of courses and/or workshops for the promoters on ecological technologies for community improvement, solid waste management and sanitation..
- 8) Propose to the Training Chief and the subcontractor responsible for the education strategy and programme material and audiovisuals for the courses and workshops.
- 9) In coordination with the Political Alliances Coordinator (PAC), negotiate with local authorities the needed support to carry out sanitation and restoration activities in 22 communities and coordinate the implementation of the actions.
- 10) Together with the PAC:
 - a) Design and undertake a campaign in support of the Technical Assistance Committee (TAC) to build conservation awareness among public servants and technical advisors, to enable re-orientation of public policies and redefinition of public works in the four surrounding states. 3.3.3
- 11) With the support of the PAC, to negotiate with local, state and federal authorities political and financial support to carry out the following actions:
 - a) Implement an extensive solid waste management plan in collaboration with communities and local authorities. 5.5.3
 - b) Promote community participation to set-up up 2,800 ecological sanitation facilities in key municipalities and urban settlements. 5.5.6
 - c) Promote proper design and installation of 4 municipal dumps within the reserve and re-location 2 other ones. 5.5.7
 - d) Establish recyclable materials stock centres in the communities.

- e) Build latrines in the communities.
 - f) Support communities to set up 25 rainwater reservoirs and to replicate the experience with the collaboration of local or state authorities (Phase II). 5.5.10
 - g) Promote multiplication of demonstration activities in new locations outside pilot areas, via field visits, workshops, distribution of extension service materials (Phase II). 5.5.11
- 12) Carry out the following activities:
- a) Design and establish a demonstrative programme of building and community management of rainwater reservoirs in 5 pilot communities. 5.5.1
 - b) Promote water management practices for domestic and productive use. 5.5.2
 - c) Permanent waste management campaigns in 150 communities in pilot areas. 5.5.4
 - d) Permanent participatory community cleaning campaigns in pilot areas . 5.5.5
 - e) Promote community operation of 100 recyclable materials stock centres. 5.5.8
 - f) Undertake qualitative and quantitative performance evaluation and refine models and proposed technologies, with the support of the Monitoring and Evaluation Coordination (MEC/MRC) (Phase II). 5.5.9
- 13) Undertake all the activities related to the improvement of women, such as the promotion of sustainable practices in their communities.
- 14) Mobilize in-kind contributions of materials needed to carry out the community improvement work plan.
- 15) Apply UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 16) Act as facilitator or trainer in areas of his/her knowledge, as required.
- 17) Apply the publications criteria in all material and documents produced in his/her area.
- 18) Follow the archives criteria when creating and maintaining the information generated in his/her area.

Selection Criteria:

CIC				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
<p>Rural development or, desirable, degree in: pedagogy, sociology, psychology, business administration, biology, technician in agronomy</p> <p>At least four years experience in the area.</p>	<ul style="list-style-type: none"> * Solid waste management * Sanitation * Group training * Elaboration and design of didactic material for courses and workshops * Communication strategies and techniques * Communitarian work * Handling of ecological technologies 	<ul style="list-style-type: none"> * Promote personnel development * Follow up of work plan and goals * Needs detection * Synthesis and planning * Attention to small details * Management by objectives * Evaluation of short and long term results * Team work * Group and personnel management * Establishment of interpersonal relations * To mobilize and coordinate people * Ability to write reports and express him/herself clearly and concise in Spanish * Negotiation 	<ul style="list-style-type: none"> * Responsible * Proactive * Objective * Empathic * Committed * Learning ability * Honest, great thrust and initiative * Convincing, congruent * Adaptable 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Availability to continuously travel in the Reserve and Queretaro * Selection through UNDP contracts committee

Position: Training Chief (TC)

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

- A. Under the supervision of the Holistic Improvement Coordinator the TC shall perform the following duties:
- 1) Prepare his/her annual and quarterly work plans to be discussed in the planning of action meetings of the Holistic Improvement Coordination.
 - 2) Design and implement the training plan.
 - 3) With the support of the Administration Coordinator (AC), identifying and hiring appropriate specialists or institutions and attending logistics aspects to carry out:
 - a) The training activities included in the training plan, in the areas of influence of the Reserve.
 - b) The in-service training programmed for the Project personnel.
 - c) Actions to send the selected personnel of the Project to take courses and/or workshops outside the Reserve.
 - d) Workshops to demonstrate the benefits of sustainable projects already implemented in communities.
 - e) Demonstrative workshops on the Sierra Gorda experience for civil society organizations interested in replicating the process.
 - 4) With the support of the AC, and in coordination with the subcontractor responsible for the education strategy and programme, manage the training centre to ensure provision of excellent services by the personnel and utilization of appropriate educational material.
 - 5) Prepare reports on the results of the area under his/her responsibility, as required.
 - 6) In coordination with the subcontractor responsible for the education strategy and programme, design needed training and diffusion materials.
 - 7) Ensure timely delivery and proper quality of the needed training and diffusion materials, either locally or with the support of the Public Relations Unit in the city of Queretaro.
 - 8) Prepare reports on the results of the area under his/her responsibility, as required.
 - 9) Carry out planning and assessing meetings with the personnel under his/her responsibility, to ensure compliance with their plans of action and contribution to the achievement of the Project outputs.
 - 10) Develop financial sustainability tools for the training centre.
 - 11) Support the Monitoring and Evaluation Coordinator (MEC/MRC) to train and familiarize project staff with project log frame and expected results. 3.1.1.c
 - 12) Development and implement, directly or through subcontracts, a training/ technical assistance plan for professional staff and/or expanded project team including, among others, the following areas: business and environmental strategic planning and management, teaching improvement, project management, negotiation techniques and environmental law and land tenure, conflict resolution, community development and consensus building techniques. 3.2.1

- 13) Development and implement a training plan to upgrade local capacities in initial and beyond pilot site communities in the subjects of: sustainable forestry management; sustainable productive land uses; low impact and high yield biodiversity-friendly eco-tourism and other sustainable productive practices. 3.2.3 (related to 5.1, 5.2, 5.3)
- 14) Supervise the design and production of all needed material to implement the in-service training for the Project personnel and training in the communities, as required.
- 15) Channel information on potential facilitators and trainers to the Administration Coordinator to incorporate in the roster.
- 16) Identify possible facilitators and trainers among the Project staff and include them in the workshops or courses, as appropriate.
- 17) Supervise the training/ re-engineering of project staff, for phase II. 3.2.4
- 18) Apply UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 19) Act as facilitator or trainer in areas of his/her knowledge, as required.
- 20) Apply the publications criteria in all material and documents produced in his/her area.
- 21) Follow the archives criteria when creating and maintaining the information generated in his/her area.

Selection Criteria:

TC				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
<p>Pedagogy, sociology, psychology, environment, communications, biology</p> <p>10 year experience in the field.</p>	<ul style="list-style-type: none"> * Business and environmental strategic planning and management * Project managing * Negotiation techniques * Consensus building techniques * Group training * Elaboration and design of didactic material for courses and workshops * Communication strategies and techniques * Communitarian work * Group managing * Financial sustainability 	<ul style="list-style-type: none"> * Promote personnel development * Follow up of work plan and goals * Needs detection * Conflict resolution * Synthesis and planning * Attention to small details * Management by objectives * Evaluation of short and long term results * Ability to write reports and express him/herself clearly and concise in Spanish * Team work * Group and personnel management * Establishment of interpersonal relations * To mobilize and coordinate people 	<ul style="list-style-type: none"> * Responsible * Proactive * Objective * Empathic * Committed * Learning ability * Honest, great thrust and initiative * Convincing, congruent * Adaptable 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Availability to travel in the Reserve and Queretaro * Selection through UNDP contracts committee

POSITION: SUSTAINABLE PRODUCTION COORDINATOR - SPC

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

A. Under the supervision of the Director General, the SPC shall be responsible for:

- 1) Preparing the annual and quarterly work plans of his/her area to be discussed in the management committee.
- 2) Participating in the meetings of the management committee to discuss the Project policies and strategies, review the work plan, ensure synergy among all the technical areas and adapt Project strategy and management accordingly.
- 3) Participating in the meetings of the Technical Advisory Committee (TAC) for assignment of chores and coordination arrangements.
- 4) Attending the meetings of the various committees or councils related to forestry and productive development at state level and negotiate the required resources from the corresponding governmental agencies.
- 5) Developing the necessary tools in the field to ensure all activities are financially sustainable.
- 6) Meeting regularly with the personnel in his/her area to monitor and assess all the activities to be carried out to ensure compliance with their plans of action and contribution to the achievement of the Project outputs.
- 7) In coordination with the Monitoring and Evaluation Coordinator (MEC):
 - a) Supporting the external evaluation activities in his/her area.
 - b) Preparing the needed technical reports of his/her area, to be submitted to the donors, government authorities, GEF and UNDP, through the Director General.
- 8) Preparing project proposals in his/her area to be submitted, by the Director General, to potential donors, with the support of the MEC and the Administration Coordinator (AC) and in coordination with the Political Alliances Coordinator (PAC).
- 9) Authorizing the payments derived from the implementation of the work plan of his/her area.
- 10) Acting as facilitator or trainer in areas of his/her knowledge, as required.
- 11) Applying UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 12) Participating in the recruitment process of the personnel and subcontractors in his/her area, under the coordination of the AC.
- 13) Overseeing the application of the publications criteria in all material and documents produced by his/her area.
- 14) Overseeing the application of the archives criteria in maintaining the files of his/her Coordination.

B. Under the supervision of the Director General, the Sustainable Production Coordinator (SPC) shall perform the following duties:

- 1) Supervise the establishment of surveillance routes and facilities in critical zones of the Reserve and the design and building of environmental interpretation facilities and signalization and posting in the Reserve, to be undertaken by the subcontracted organization, with the support of the Administration Coordinator (AC). 1.1.2, 1.1.3
- 2) Supervise the actions to be undertaken by the subcontracted organization to refine targeted research to focus on production and conservation constraints, with the support of the Monitoring and Evaluation Coordinator (MEC) (Phase II) 2.1.7
- 3) Supervise the forming and strengthening of community level committees to implement and monitor conservation and sustainable use initiatives in all pilot areas to be undertaken by subcontracted organization, with the support of the Holistic Improvement Coordination, as required. 3.3.4
 - a) Develop and monitor 5 site-specific development plans to be revised in a yearly basis. 3.3.4 a
 - b) Execute capacity development plans for target communities in 5 pilot areas. 3.3.4 b
- 4) Supervise the forming and strengthening of community level committees and grassroots organizations beyond pilot sites in the four surrounding states, to be undertaken by the subcontracted organization in Phase II. 3.3.7
- 5) Coordinate the definition and establishment of the reserve boundaries and zoning to be undertaken by the subcontracted organization. 3.6.1
- 6) Supervise the actions of the subcontracted organization to support PROFEPA officers to undertake mandatory audits of forest exploitation quotas, illegal hunting, provoked fires and illicit route opening, as well as the operation of the field bases.
- 7) Support the negotiations with communities and small holders for carbon sequestration, establishment and operation of surveillance facilities, diversification projects and natural regeneration as well as rent and purchase of land for conservation to be carried out by the subcontracted organization .
- 8) Supervise the establishment of natural regeneration areas, for commercial purposes, in additional sites, incorporating 1,500 hectares, undertaken by the subcontracted organization, in consultation con with Business and Financial Advisory Committee (BFAC). (Phase II) 3.4.17
- 9) Supervise the conservation and rehabilitation activities that follow, undertaken by the subcontracted organization, with the support of the Political Alliances Coordinator (PAC):
 - a) Coordinate second-tier actions related to watershed management and water services with the government of San Luis Potosi and CNA, carbon sequestration and carbon bond market development with the Office of Climate Change at CONANP (Phase II). 3.3.8
 - b) Protect and rehabilitate key watershed areas at Pinal de Amoles and Arroyo Seco. 3.4.1
 - c) Establish natural regeneration areas in selected sites covering 2,000 hectares. 3.4.6
 - d) Negotiate and implement the expansion of the conservation and biodiversity protection activities to the whole reserve territory considering influence activities of the four surrounding states (Guanajuato, Hidalgo, Queretaro and San Luis Potosi), with the support of the HIC (Phase II). 3.4.15
- 10) Supervise the subcontracted organization in the undertaking of basic conservation and biodiversity protection activities in five identified key core areas (Pinal de Amoles, Joya del Hielo, Cañada de las

- Avispas, Misión de Bucareli and Ayutla), involving two of the four surrounding states (Queretaro and San Luis Potosi), with the support of the Holistic Improvement Coordinator (HIC) 3.4.2
- a) Promote land use regularization and enforcement.
 - b) Establish voluntary participation and community participatory civil surveillance conservation brigades in 70 communities.
 - c) Establish biodiversity conservation control facilities.
 - d) Support PROFEPA officers to undertake mandatory audits of forest exploitation quotas, illegal hunting, provoked fires and illicit route opening.
 - e) Control and support enforcement of regulations on slash and burn agricultural practices.
 - f) Follow up legal prosecutions to guarantee dissuasive enforcement.
- 11) Supervise the following conservation and rehabilitation activities, to be undertaken by the subcontracted organization, with the support of the DSCC, the PAC and external consultants, as required:
- a) Protect the four identified north-south biological corridors. 3.4.3
 - b) Rent or purchase critical areas to guarantee strict conservation. 3.4.4
 - c) Establish a carbon storage pilot project in 5,000 hectares of old forests. 3.4.5
 - d) Negotiate with SEMARNAT disease control and combat. 3.4.8
 - e) Negotiate agreements to guarantee water availability for flora and fauna. 3.4.9
 - f) Develop and apply pilot recuperation schemes for environmental services. 3.4.12
 - g) Review biodiversity conservation plans in accordance with forest fragmentation and status information, community committee management information, experience and acceptance (Phase II). 3.4.14
- 12) Support the subcontracted organization, to detect needs and to identify specialists to train local capacities beyond initial pilot site communities, in the subjects of: sustainable forestry management; sustainable productive land uses; low impact and high yield biodiversity-friendly eco-tourism and other sustainable productive practices, to be undertaken by the HIC (Phase II). 3.2.3 (related to 5.1, 5.2, 5.3)
- 13) Supervise the following activities to be undertaken by the subcontracted organization, with support from the Research and Studies Chief to achieve conservation and rehabilitation:
- a) Integration of ecosystem management models that conserve biodiversity and sequester carbon in selected areas. 3.4.13
 - b) Protection of the two remaining east-west biological corridors providing the Reserve with holistic coverage in conservation and rehabilitation activities (3.4.16), carbon sequestration (3.4.5), rent or purchase of land (3.4.4) (Phase II).
- 14) Supervise the promotion of wild fire prevention and control activities undertaken by the subcontracted organization, with the support of the HIC, when necessary:
- a) Establish equipment and facilities to prevent and control wildfires in high-risk areas. 3.5.1
 - b) Support law enforcement to prevent utilization of fire as an agricultural tool. 3.5.2
 - c) Prevent and combat wildfires through awareness-building activities. 3.5.3
 - d) Establish fire-resistant breaches to protect nucleus zones. 3.5.4
 - e) Establish an effective incentive scheme to train 10 volunteer fire-prevention corps and four fire-control brigades in high risk areas. 3.5.5
 - f) Establish an awareness campaign to prevent fire usage in key communities of the four surrounding states (Phase II). 3.5.6
 - g) Expand fire control and prevention assets in the states of Guanajuato and Hidalgo and in the Northern border of the Reserve with the state of San Luis Potosi (Phase II). 3.5.7
- 15) With the support of the Coordinators for Holistic Improvement and for Monitoring and Evaluation, develop and implement a monitoring system on community participation, community empowerment and life quality improvement. 3.6.4

- 16) In consultation with the Business and Finance Advisory Committee (BFAC):
- a) Strengthen GESG and FRMU business capacities through assignment of business experts and consultants per line of service. 4.1.2
 - b) Assess business results and progressive coverage of incremental recurrent costs to adapt strategy and widen the range of services provided (Phase II). 4.1.6
- 17) In consultation with the BFAC, supervise development of business strategies to be carried out by the subcontracted organization:
- a) Community brokerage, producers co-ordination and technical assistance designed to link private enterprises with small holders in high-yield forestry plantations in degraded areas, negotiating profit sharing contracts for plantation yield and finished products resulting from this yield (this relates to the activity 5.1.2). 4.1.3
 - b) The provision of technical assistance and marketing services provided to local producers (this relates to bundles of activities 5.1, 5.2 and 5.4). 4.1.4
 - c) Community-based eco-tourism, including design, operation and promotion services (this relates to bundle of activities 5.3), PDC. 4.1.5
 - d) Evaluate financial performance of newly established enterprises to adapt replication strategy (Phase II). 5.2.5
 - e) Evaluate business performance in terms of client satisfaction and financial profitability of community operated eco-tourism to adapt strategy for Phase II. 5.3.5
 - f) Create a scheme for allocating eco-tourism financial utilities in site-specific conservation projects (Phase II), PDC. 5.3.7
 - g) Undertake a socio-economic and a business evaluation to adapt strategy (Phase II), with the support of MEC. 5.4.5
 - h) Promote corporate investments in low-risk locations in the four surrounding states to ensure alternative livelihoods (Phase II), PDC. 5.4.6
- 18) In consultation with the Business and Finance Advisory Committee, supervise the following activities to ensure sustainable forestry management; to be undertaken by the subcontracted organization:
- a) Promote community participation in the definition and development of alternative forestry uses to ensure community ownership in the five defined pilot areas. 5.1.1
 - b) Provide technical advice on forestry management to landholders in pilot areas. 5.1.3
- 19) In consultation with the BFAC, supervise the following activities to ensure sustainable forestry management; to be undertaken by the subcontracted organization:
- a) Develop strategic partnerships between more than 4,000 local smallholders and corporations to develop high-yield commercial plantations exclusively with native species for the *cellulose* and *wood* market (7,000 hectares) capitalizing on the unique productive capacity of the reserve and an already tested business opportunity. 5.1.2
 - b) Promote the creation and business consolidation of associations and strategic partnerships among forest smallholders through brokerage and conflict resolution methods. 5.1.4
- 20) In consultation with the BFAC, supervise the following activities to ensure sustainable forestry management; to be undertaken by the subcontracted organization:
- a) Develop demonstrative initiatives of processing and commercialization of timber sub-products in top timber producing areas. 5.1.5
 - b) Establish:
 - i) One pilot sustainable commercial management project of highly valued *cycades*, for the national market. 5.1.6
 - ii) One pilot sustainable commercial management project of *white-tailed deer* for the national market. 5.1.7

- c) Develop demonstrative commercial sustainable management of non-timber products like *damiana*, *oregano*, *pine-nut*, and *bay leaf* in semi-desert pilot areas. 5.1.8
 - d) Develop analogue forestry plantations, re: *palms*, *mushrooms*, *medicinal plants*, *forest fruits* and *butterflies* in temperate forest pilot areas. 5.1.9
 - e) Develop downstream market integration of aforementioned forestry products through marketing research, planning and diversified commercialization. 5.1.11
 - f) Evaluate profitability of alternative uses and market opportunities to refine and adapt strategy (Phase II). 5.1.12
 - g) Promote replication at the site level beyond the pilot areas based on best business and environmental practices (Phase II). 5.1.14
 - h) Promote market expansion of Phase I successful products (Phase II). 5.1.15
- 21) Supervise promotion of expansion of successful experiences in the four states via market forces and local, state and federal agencies (especially SAGAR and SEDESOL, aside from SEMARNAT) to be undertaken by the subcontracted organization, and with the support of the PAC (Phase II). 5.1.16
- 22) Supervise the following activities to increment other alternative and sustainable land uses; to be undertaken by the subcontracted organization, with the support of the HIC, when necessary:
- a) Develop and market *pino greguii* seeds and ornamental plants seeds, re. *helichisum bracteatum*, *limonium sinuatum*, *achillea filipendulina*, *achillea millefolium*, *xerantemun annuum*, *lunaria annua* and *physalis*. 5.2.1
 - b) Demonstrate intensive goat ranching practices in key communities, so as to protect key habitats and endemic species, re. *Cactaceae*. 5.2.2
 - c) Establish two pilot fish farms in communities with maximum replication potential. 5.2.3
 - d) Establish an ornamental bird's production center for commercial purposes, re. *agapornis*, *ninfa*, *cabrita*, *canárica* (canary), *codorniz* (quail) and *perdiz* (pheasant). 5.2.4
 - e) Plant 15,000 fruit trees for commercial purposes outside pilot areas and promote massive replication financed by other agencies, especially SAGAR and SEDESOL and by market forces (Phase II). 5.2.6
 - f) Promote replication of well performing productive experiences in influence areas of the four surrounding states with the collaboration of the state and municipal authorities, with the support of the PAC (Phase II). 5.2.7
 - g) Promote the market expansion of best performing products via professional marketing technical assistance, to favour replication opportunities (Phase II). 5.2.8
- 23) Supervise the following activities to ensure low impact and high yield biodiversity friendly eco-tourism management with local communities (mostly non-GEF); to be undertaken by the subcontracted organization:
- a) Design and execute eco-tourism community management plans and regularize eco-tourism community operators pertaining to the following 6 communities: *Cuatro Palos*, *Bucarelli*, *Sta. María de Cocos*, *San Juan de los Durán*, *Madroño Landa*, and *Rio Blanco*. 5.3.1
 - b) Demarcate eight eco-tourism routes provided with facilities of environmental awareness building and interpretation. 5.3.2
 - c) Demarcate two defined routes for cyclists in collaboration with local authorities. 5.3.3
 - d) Establish and demarcate two routes for bird-watchers. 5.3.4
- 24) In coordination with the MEC, appraise initial currently capacity of eco-tourism after Phase I and adapt strategy accordingly, in consultation with the BFAC (Phase II). 5.3.6
- 25) Supervise other sustainable productive practices (non-GEF); to be undertaken by the subcontracted organization:
- a) Collaborate in the establishment of a fabric manufacturing plant to provide with an alternative livelihood option to local communities. 5.4.1

- b) Establish a pilot candle-manufacturing workshop and a ceramic handicraft workshop and develop the corresponding common commercial and distribution capacities. 5.4.2
 - c) Implement a demonstrative programme establishing 350 household vegetable gardens in the communities pertaining to the five pilot areas. 5.4.3
 - d) Implement an integrated pilot programme of fruit gardening, planting 25,000 fruit trees for commercial purposes and establishing three fruit processing plants. 5.4.4
- 26) In consultation with the BFAC supervise the actions of the subcontracted organization to:
- a) Undertake a socio-economic and a business evaluation to adapt strategy (Phase II), with the support of the MEC. 5.4.5
 - b) Promote corporate investments in low-risk locations in the four surrounding states to ensure alternative livelihoods. (Phase II). 5.4.6
 - c) Develop the Sierra Gorda brand.
 - d) Carry out three fruit dehydration workshops 5.4.1
 - e) Establish three bakeries.
 - f) Follow up to the consolidation of medium-term productive processes.

Selection Criteria:

SPC				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
<p>Forest engineer, agronomy, biology, economy with specialty in the environment</p> <p>Master degree in sustainable forest handling and biodiversity or the equivalent of 10 years experience in the field</p>	<ul style="list-style-type: none"> * Forest and environmental investigation * Forest handling and improvement * Socioeconomy, forestry status and geography of the Reserve * Sustainable production * Plagues, fires and soil conservation * Flora and fauna handling and conservation * Reforestation * Creation and development of new business and work associations * Eco-tourism concepts and practice * Communitarian work * Marketing and communication techniques * Wood and non-wood products trade * Strategic planning * Contact with state, federal and local governmental agencies * Environmental impact programs * Very good knowledge of English (reading, writing and speaking) 	<ul style="list-style-type: none"> * Managing by objectives * Constant and close follow up of work plan and goals * Establishment of long, short and medium term goals * Negotiation and conflict resolution * Interdisciplinary team work * Integrating team work managing * Establish interpersonal relations * To mobilize and coordinate people * Positive and open leadership * Business sense and ability to promote its development * Proactive * Replicate previous learning experiences adapting them to the region * Writing reports and project proposals * Express him/herself clearly and concise in Spanish 	<ul style="list-style-type: none"> * Self motivated * Responsible * High level commitment * Adaptable * Empathic * Honest, great thrust and initiative * Convincing, congruent 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Availability to continuously travel through the Reserve and Queretaro * Selection through UNDP contracts committee

POSITION: MONITORING AND EVALUATION COORDINATOR - MEC

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

A. Under the supervision of the Director General, the MEC will be responsible for:

- 1) Preparing the annual and quarterly work plans of his/her area to be discussed in the management committee.
- 2) Participating in the meetings of the management committee to discuss the Project policies and strategies, review the work plan and ensure synergy among all the technical areas.
- 3) Participating in the meetings of the Technical Advisory Committee (TAC) for assignment of chores and coordination arrangements and to follow up the baseline of the sustainable public works.
- 4) Meeting regularly with the personnel in his/her area to monitor and assess all the activities to be carried out to ensure compliance with their plans of action and contribution to the achievement of the Project outputs.
- 5) Supporting and coordinating the external evaluation process in the technical areas.
- 6) Coordinating the monitoring of Project outputs and the elaboration of the needed technical reports, of all the areas, with the support of the Monitoring and Reporting Chief (MRC), to be submitted to the donors, government, GEF and UNDP, through the Director General.
- 7) Coordinate and lead, with the support of the MRC and together with the Resource Mobilization Unit Chief and the Administration Coordinator, the project proposal formulation process (logical frames, calendar of activities, budgets, etcetera) to support the technical areas.
- 8) Preparing project proposals in his/her area to be submitted, by the Director General, to potential donors, with the support of the AC and Political Alliances Coordinator (PAC).
- 9) Authorizing the payments derived from the implementation of the work plan of his/her area.
- 10) Participating in the recruitment process of the personnel and subcontractors in his/her area, under the coordination of the Deputy Director for Administration.
- 11) Acting as facilitator or trainer in areas of his/her knowledge, as required.
- 12) Applying UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 13) Overseeing the application of the publications criteria in all material and documents produced by his/her Coordination.
- 14) Overseeing the application of the archives criteria in maintaining the files of his/her Coordination.

B. Under the supervision of the Director General, the MEC shall perform the following duties:

- 1) Supervise the following actions to be undertaken by the Monitoring and Reporting Chief (MRC):
 - a) Design, implementation and updating of a data base system to monitor the overall management of the Project and the individual activities.
 - b) Train the Project personnel to feed and/or provide information on their areas of responsibility for the data base system.
 - c) Teach the Project personnel the logical framework for project formulation.
 - d) Design a methodology to carry out internal evaluation of the activities undertaken by the Project personnel.
 - e) Design and update the baseline of the Project development work plan.
 - f) Design and update the baseline to follow up the sustainable public works and the development framework.

- 2) Supervise the following activities to be undertaken by the Research and Studies Chief (RSC) to ensure proper baseline assessments:
 - a) Diagnose and gather existent relevant research on the reserve natural resources status and dynamics. 2.1.1
 - b) Update comprehensive baseline on biodiversity and establish a monitoring system on recuperation, conservation and change in land use. 2.1.2
 - c) Targeted research: 2.1.3
 - i) Identify and map land use potential and patterns
 - ii) Assess and monitor key watershed quantitative and qualitative status and functions
 - iii) Status and monitoring of key habitats
 - iv) Endemic, endangered and charismatic species population dynamics.
 - v) Vascular plant inventories.
 - d) Undertake social assessment of pilot area communities through qualitative and quantitative sampling techniques. 2.1.5
 - e) Undertake an economic valuation of natural resources and environmental services, including water services and carbon storage. 2.1.8
 - f) Publish research findings and project results and disseminate them outside pilot areas and abroad. 2.1.9

- 3) Supervise the actions to support the Productive Diversification Chief to refine targeted research to focus on production and conservation constraints. 2.1.7

- 4) Supervise the design of a methodology to undertake a thorough institutional evaluation at the end of Phase I of the Project, with the support of the Monitoring and Reports Chief (MRC), to be discussed in the Steering Committee. 3.1.2

- 5) Supervise the following activities to be undertaken by the RSC:
 - a) Establish and maintain a multifaceted database and a geographic information system (GIS) at the site level to inform management decisions and a regular monitoring programme based on information management. 3.6.2
 - b) Co-ordinate with CONABIO to acquire and update information generated by the national GIS and the national system of biodiversity information. 3.6.3
 - c) Develop and implement a monitoring system on community participation, community empowerment and life quality improvement. 3.6.4
 - d) Synthesize environmental and socio-economic information for decision making and diffusion purposes. 3.6.5
 - e) Update annually the progress report towards sustainability to be published at the end of the year 4, 3.6.6

- f) Update the biological, ecological, social and economic databases to monitor project conservation patterns and impact (Phase II). 3.6.7
 - g) Continue acquiring and updating information to GIS and ensuring linkage with CONABIO's biodiversity monitoring and evaluation system (SNIB) (Phase II). 3.6.8
- 6) Supervise and back up as needed the lobbying activities and the negotiations to establish agreements to be undertaken by the RSC to obtain support and collaboration from academia and universities on specific research and/or scientific information.
- 7) Develop and monitor an annual operational plan and budget for inter-institutional co-operation among TAC members, promoting institutional support and re-channelling of monetary funds, to be undertaken by the MRC, in coordination with the Political Alliances Coordinator to. 3.3.1 b)
- 8) In consultation with the Business and Financial Advisory Committee, supervise the support the MRC will provide to the Sustainable Production Coordinator to:
- a) Appraise the capacities and results of eco-tourism after phase I and adapt strategy accordingly. 5.3.6
 - b) Undertake a socio-economic and a business evaluation to adapt strategy for other sustainable productive practices (non-GEF) 5.4

Selection Criteria:

MEC				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
<p>Biology, sociology, geography, anthropology, environmental engineering, economy, planning</p> <p>Preferably with masters degree or five-year experience in the field</p>	<ul style="list-style-type: none"> * Strategic planning * Monitoring and evaluation * Socioeconomic and business evaluation * Project cycle (logical framework) * Investigation and/or biodiversity inventory making * Geographic information system * Excellent use of PC * Database elaboration and handling * Very good knowledge of English (reading, writing and speaking) 	<ul style="list-style-type: none"> * Training * Attention to detail * Problem synthesis and analysis * Establishment of long, short and medium term goals * Negotiation and conflict resolution * Information integration * Close follow up of work plan and goals * Excellent use of numbers and statistics software * Ability to write reports and express him/herself in Spanish * Team work coordination * Under pressure work tolerance 	<ul style="list-style-type: none"> * Good relations with people * Constant * Responsible * Adaptable * Honest, great thrust and initiative * Convincing, congruent 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Availability to occasionally travel in the Reserve * Selection through UNDP contracts committee and DG

POSITION: MONITORING AND REPORTING CHIEF (MRC)

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

- A. Under the supervision of the Monitoring and Evaluation Coordinator, the MRC shall perform the following duties:
- 1) Prepare his/her annual and quarterly work plans to be discussed in the planning of action meetings of the Monitoring and Evaluation Coordination..
 - 2) Prepare reports on the results of the area under his/her responsibility, as required.
 - 3) Support the MEC in the monitoring of Project outputs and the elaboration of the needed technical reports, with the aid of all the areas, to be submitted to the donors, government, GEF and UNDP, through the Director General.
 - 4) Carry out planning and assessing meetings with the personnel of the other Coordinations, as needed, to ensure proper registry of results during the monitoring and evaluation processes.
 - 5) Support the MRC to coordinate and lead, together with the Resource Mobilization Unit Chief and the Administration Coordinator, the project proposal formulation process (logical frames, calendar of activities, budgets, etcetera) to support the technical areas.
 - 6) Carry out the following actions:
 - a) Design, implementation and updating of a data base system to monitor the overall management of the Project and the individual activities.
 - b) Training of the Project personnel to feed and/or provide information on their areas of responsibility for the data base system.
 - c) Teaching the Project personnel the logical framework for project formulation.
 - d) Design a methodology to carry out internal evaluation of the activities undertaken by the Project personnel.
 - e) Design and update the baseline of the Project development work plan.
 - f) Design and update the baseline to follow up the sustainable public works, to support the Political Alliances Coordinator (PAC).
 - 7) Develop and monitor an annual operational plan and budget for inter-institutional co-operation among TAC members, promoting institutional support and re-channelling of monetary funds, in coordination with the PAC. 3.3.1 b
 - 8) In consultation with the Business and Financial Advisory Committee, support the Sustainable Production Coordinator (SPC) to:
 - a) Appraise the capacities and results of eco-tourism after Phase I and adapt strategy accordingly. 5.3.6
 - b) Undertake a socio-economic and a business evaluation to adapt strategy for other sustainable productive practices (non-GEF) 5.4.5
 - 9) Design a methodology to undertake a thorough institutional evaluation at the end of Phase I of the Project. 3.1.2

- 10) Apply UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 11) Act as facilitator or trainer in areas of his/her knowledge, as required.
- 12) Apply the publications criteria in all material and documents produced in his/her area.
- 13) Follow the archives criteria when creating and maintaining the information generated in his/her area.

Selection Criteria:

MRC				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
<p>Biology, sociology, statistics, anthropology, environmental engineering, economy, management information technology, planning</p> <p>Five-year experience in the field.</p>	<ul style="list-style-type: none"> * Strategic planning * Socioeconomic and business evaluation * Project formulation (logical framework and budget) * Communitarian work * Socio-economy and geography of the Reserve * Regional processes * Technical (computer programmes) * Design and implementation of database systems * Very good knowledge of English (reading, writing and speaking) 	<ul style="list-style-type: none"> * Attention to detail * Establishment of long, short and medium term goals * Information integration * Close follow up of work plan * Excellent use of statistics software * Ability to write reports and express him/herself in Spanish * Team work coordination * Under pressure work tolerance 	<ul style="list-style-type: none"> * Good relations with people * Committed * Constant * Responsible * Adaptable * Honest, great thrust and initiative * Convincing, congruent 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Availability to travel in the Reserve * Selection through UNDP contracts committee

POSITION: RESEARCH AND STUDIES CHIEF (RSC)

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

- A. Under the supervision of the Monitoring and Evaluation Coordinator (MEC), the RSC shall perform the following duties:
- 1) Prepare his/her annual and quarterly work plans to be discussed in the planning of action meetings of the Monitoring and Evaluation Coordination.
 - 2) Prepare reports on the results of the area under his/her responsibility, as required.
 - 3) Negotiate with academic or research institutions support to ensure proper baseline assessments requiring targeted research: 2.1.3
 - a) Identify and map land use potential and patterns
 - b) Assess and monitor key watershed quantitative and qualitative status and functions
 - c) Status and monitoring of key habitats
 - d) Endemic, endangered and charismatic species population dynamics.
 - e) Vascular plant inventories.
 - 4) Undertake an economic valuation of natural resources and environmental services, including water services and carbon storage (Phase II). 2.1.8
 - 5) Prepare research findings and project results for publication and dissemination outside pilot areas and abroad, previously authorized by the MEC (Phase II). 2.1.9
 - 6) Support the Sustainable Production Coordinator (SPC) to ensure proper baseline assessments to:
 - a) Diagnose and gather existent relevant research on the reserve natural resources status and dynamics. 2.1.1
 - b) Restore and manage flora and fauna resources.
 - c) Update comprehensive baseline on biodiversity and establish a monitoring system on recuperation, conservation and change in land use. 2.1.2
 - 7) Carry out the following activities:
 - a) Establish and maintain a multifaceted database and a geographic information system (GIS) at the site level to inform management decisions and a regular monitoring program based on information management. 3.6.2
 - b) Co-ordinate with CONABIO to acquire and update information generated by the national GIs and the national system of biodiversity information. 3.6.3
 - c) Develop and implement a monitoring system on community participation, community empowerment and life quality improvement. 3.6.4
 - d) Synthesize environmental and socio-economic information for decision making and diffusion purposes. 3.6.5
 - e) Update annually the progress report towards sustainability to be published at the end of the year 4, 3.6.6
 - f) Update the biological, ecological, social and economic databases to monitor project conservation patterns and impact (Phase II). 3.6.7
 - g) Continue acquiring and updating information to GIS and ensuring linkage with CONABIO's biodiversity monitoring and evaluation system (SNIB) (Phase II). 3.6.8

- 8) Carry out lobbying activities and negotiations to establish agreements to obtain support and collaboration from academia centers, universities and financial support organizations on specific research and/or scientific information.
- 9) Apply UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 10) Act as facilitator or trainer in areas of his/her knowledge, as required.
- 11) Apply the publication criteria in all material and documents produced in his/her area.
- 12) Follow the archives criteria when creating and maintaining the information generated in his/her area.

Selection Criteria:

RSC				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
Biology, sociology, anthropology, environmental engineering, economy Preferably master degree.	<ul style="list-style-type: none"> * Diagnose and research of natural resources * Economic valuation of natural resources and environmental services * Biodiversity recuperation and conservation * Research and/or biodiversity inventory making * Social and economic change in Reserve areas * Project design * Database elaboration * Publishing previous investigations * Contact with the academia and universities sector * Very good knowledge of English (reading, writing and speaking) 	<ul style="list-style-type: none"> * Attention to detail * Problem synthesis and analysis * Information integration * Close follow up of work plan and goals * Excellent use of numbers and statistics software * Ability to write reports and expresses him/herself in Spanish 	<ul style="list-style-type: none"> * Good relations with people * Constant * Committed * Responsible * Adaptable * Honest, great thrust and initiative * Convincing, congruent 	<ul style="list-style-type: none"> * Live in Queretaro or Mexico City * Availability to continuously travel in the Reserve, Queretaro and México City * Part-time position * Selection through UNDP contracts committee

POSITION: ADMINISTRATION COORDINATOR - AC

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

A. Under the supervision of the Director General, the AC shall be responsible for:

- 1) Preparing the annual and quarterly work plans of his/her area to be discussed in the management committee.
- 2) Participating in the meetings of the management committee to discuss the Project policies and strategies, review the work plan and ensure synergy among all the technical areas.
- 3) Integral managing of the Project, including the: 3.1.1 a
 - a) Mobilization of all Project inputs.
 - b) Contracting local Project staff for the management positions and sub-contracts beyond \$US30,000, previously authorized by the UNDP contracts committee.
 - c) Contracting local Project staff, consultants and sub-contractors under US\$29,999, previously authorized by the local contracts committee.
 - d) Contracting the needed international Project staff decided in the UNDP contracts committee, with the administrative support of the UNDP office.
 - e) Ensuring payment of government and other donors commitments.
- 4) Convening, organizing and preparing the official documentation of the meetings and assemblies of the Directive Council of the Grupo Ecológico Sierra Gorda (GESG), institution of private assistance (Junta de Asistencia Privada), member of the Junta de Asistencia Privada.
- 5) Supporting the Coordinations and the Units by providing timely delivery of the needed inputs to achieve the Project outputs.
- 6) Supervising strict adherence of management committee members to UNDP policies and procedures, within the framework of the national execution modality.
- 7) Meeting regularly with the personnel in his/her area to monitor and assess all the activities to be carried out to ensure compliance with their plans of action and contribution to the achievement of the Project outputs.
- 8) Supporting the external evaluation activities in his/her area, in coordination with the Monitoring and Evaluation Coordinator (MEC).
- 9) Authorizing the payments derived from the implementation of the work plan of all the Co-ordinations, including the one under his/her responsibility.
- 10) Being accountable for the financial management of the Project, thus ensuring accurate accounting systems.
- 11) Supporting the coordinators in the preparation of project proposals budgets and financial reports of on-going activities.

- 12) With the support of the MEC:
 - a) Elaborating the needed technical reports of his/her area, to be submitted to the donors and government authorities.
 - b) Preparing project proposals in his/her area to be submitted, by the Director General to potential donors.
- 13) Establishing the archives criteria to be applied to all the files of the Project and ensuring its application in his/her Coordination.
- 14) Drafting the rules and procedures for the local contracts committee and the procurement committee, to be discussed with UNDP.
- 15) Overseeing the application of the publications criteria in all material and documents produced by his/her Coordination.
- 16) Acting as facilitator or trainer in areas of his/her knowledge, as required.

B. Under the supervision of the Director General and following UNDP guidelines and procedures, the AC shall perform the following duties:

- 1) Prepare needed documentation and follow up negotiations to ensure timely disbursements from the financial resources committed to the Project: government, GEF, UNDP, others.
- 2) Ensure the inter-institutional agreements, covenants or contracts meet legal requirements.
- 3) Support the Training Chief (TC) in all logistics related to design and implementation of an *ad hoc* introductory workshop on Project scope, objectives, stakeholders and Reserve strengths and weaknesses, as well as on UNDP procedures and administrative related matters, for all Project staff.
- 4) Support the TC in all logistics related to the implementation of the training technical assistance plan (project management, strategic planning, political negotiation and problem solution techniques, etcetera) for professional staff and/or expanded Project team. 3.1.1 c, 3.2
- 5) With the support of the Administrative Assistant (AA) carry out the following activities related to the Project personnel:
 - a) Identify suitable candidates to fill all positions and subcontracts, in consultation with the corresponding technical areas and UNDP.
 - b) Lead the recruitment process of all the personnel and subcontractors in the Project, in coordination with the corresponding areas.
 - c) Establish and coordinate the local contracts committee to select the required personnel for levels under the Coordinators.
 - d) Create and maintain a roster of candidates for all positions in the Project.
 - e) Supervise the work of the administrative Project staff, in coordination with their immediate chiefs, and provide the needed administrative follow up to all Project personnel and short-term consultants.
 - f) Prepare the payroll and required documentation to cover the taxes (ISPT, IMSS, SAR, INFONAVIT, etcetera).
- 6) With the support of the AA and the Maintenance Chief (MC), as appropriate, undertake the following actions, in consultation with the corresponding technical areas:

- a) Establish and provide equipment, furniture and utilities for Jalpan and Queretaro offices, as well as for new field offices, as needed. 1.1.6
 - b) Provide administrative backstopping to the office in Queretaro city.
 - c) Build and/or establish and maintain: a biodiversity monitoring center, hydro-climatologic monitoring system, training center, Safari Camp, etcetera. 1.1.1, 1.1.4, 1.1.5
 - d) Facilitate administrative backstopping to subcontractors and training activities supported by the Project.
 - e) Buy the vehicles, office furniture, computer and audiovisual equipment and signals to be placed in the field, needed by the Project.
 - f) Following the procedures of the procurement committee, attend all administrative work to buy all needed parts for repairs, maintenance material and appropriate insurance for the vehicles and equipment.
 - g) Maintain a permanently updated inventory of Project office equipment and furniture.
- 7) Once approved Phase II core areas, strengthen infrastructure requirements, particularly the field structures, equipment and facilities to enable management, research and monitoring in the whole Reserve and in buffer and transition zones of the four surrounding states, in consultation with the corresponding technical areas, and with the support of the AA and the MC, as required.
- 8) With the support of the MC:
- a) Subcontract, as needed, the construction and maintenance of the Project infrastructure: training centre, Safari Camp, etcetera.
 - b) Supervise that all Project inputs (premises, vehicles, computers, hardware and software, office furniture, audiovisual equipment and materials) are properly handled and well maintained.
 - c) Maintain a permanently updated inventory of Project field equipment.
- 9) Support the Sustainable Production Coordinator (SPC) and/or subcontracted NGO or firm in the design, building and maintenance of environmental interpretation facilities and signalization and posting in the Reserve. 1.1.3
- a) Supervise the elaboration, by the Accountant General, of the needed budgets and financial reports, ensuring fiscal and financial accountability, to be submitted to the donors, government, GEF and UNDP, through the Director General.
 - b) Supervise and coordinate the work of the staff under his/her supervision: Accountant General, Maintenance Chief, Administrative Assistant, and the administrative personnel in both offices, Jalpan and Queretaro.

Selection Criteria:

AC				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
<p>Business administration, international relations, accounting, economy</p> <p>Five years experience in the field</p>	<ul style="list-style-type: none"> * Managing of communitarian project material and financial resources * Handling of suppliers and subcontractors, especially in the construction area * Accounting and fiscal process of a financial report * Legal topics related to hiring process and interinstitutional covenants * Human resources managing and process * Recruitment and selection techniques * Work with international organizations * Very good knowledge of English (reading, writing and speaking) * Elaboration and follow up of financial reports (incomes, outcomes, collect, etc.) * Decision-making 	<ul style="list-style-type: none"> * Establishment of long, short and medium term goals * Negotiation and conflict resolution * Managing by objectives without constant supervision * Work groups coordination * Team work * Personnel supervision * Needs detection * Proactive * Organization * Follow up of work plan and goals * Excellent use of numbers * Writing reports and express him/herself in Spanish 	<ul style="list-style-type: none"> * Responsible * Service oriented * Committed * Honest, great thrust and initiative * Adaptable * Convincing, congruent 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Availability to continuously travel through the Reserve and Queretaro * Selection through UNDP contracts committee

POSITION: ACCOUNTANT GENERAL (AG)

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

A. Under the supervision of the Administration Coordinator, the AG shall perform the following duties:

- 1) Prepare his/her annual and quarterly work plans to be discussed in the planning of action meetings of the Administration Coordination.
- 2) Prepare reports on the results of the area under his/her responsibility, as required.
- 3) Design/acquire and establish appropriate computer programmes to follow up all expenses and produce needed financial reports.
- 4) Maintain updated the accounting books and related documentation to monitor and control the budget to prevent over expenditures.
- 5) In coordination with the Monitoring and Evaluation Coordinator, prepare the needed budgets and financial reports, ensuring fiscal and financial accountability, to be submitted to the donors, government, GEF and UNDP, through the Director General.
- 6) Make all payments of expenses cleared by the corresponding Coordinators and previously authorized by the Administration Coordinator.
- 7) Prepare all needed material for the periodical audits and provide timely and quality information to the auditors.
- 8) Acts as facilitator or trainer in areas of his/her knowledge, as required.
- 9) Apply UNDP polices and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 10) Apply the publications criteria in all material and documents produced in his/her area.
- 11) Follow the archives criteria when creating and maintaining the information generated in his/her area.

Selection Criteria:

AG				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
Accounting, business administration 2 years of proven experience	<ul style="list-style-type: none"> * Taxes (ISPT, IMSS, AFORE, INFONAVIT) * Preparation of budgets and financial reports * Fiscal and financial managing * Preparations for audits * Accounting PC programs 	<ul style="list-style-type: none"> * Work by objectives * Information synthesis * Close and constant follow up of work plan and goals * Organization * Excellent use of numbers 	<ul style="list-style-type: none"> * Self motivated * Highly committed * Responsible * Honest, great thrust and initiative * Convincing, congruent * Adaptable 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Selection through UNDP contracts committee

POSITION: MAINTENANCE CHIEF (MC)

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

A. Under the supervision of the Administration Coordinator, the MC shall perform the following duties:

- 1) Prepare his/her annual and quarterly work plans to be discussed in the planning of action meetings of the Administration Coordination.
- 2) Prepare reports on the results of the area under his/her responsibility, as required.
- 3) Design and establish appropriate computer programme to register the inventory of all equipment and furniture of the Project.
- 4) Carry out the following activities:
 - a) Subcontract, as needed, the construction and maintenance of the Project infrastructure: training centre, Safari Camp, etcetera.
 - b) Supervise that all Project inputs (premises, vehicles, computers, hardware and software, office furniture, audiovisual equipment and materials) are properly handled and well maintained.
 - c) Maintain a permanently updated inventory of Project field equipment.
- 5) Ensure the vehicles, infrastructure, office furniture, computer and audiovisual equipment and the environmental interpretation facilities and signalization and posting in the Reserve are kept in perfect condition and carry out needed maintenance and repairs, as appropriate. 1.1.3
- 6) Order all needed parts for repairs, maintenance material and appropriate insurance for the vehicles and equipment through the Administrative Assistant.
- 7) Coordinate the utilization of the Project vehicles and supervise the presentation of the required reports of the drivers.
- 8) Act as facilitator or trainer in areas of his/her knowledge, as required.
- 9) Apply UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 10) Apply the publications criteria in all material and documents produced in his/her area.
- 11) Follow the archives criteria when creating and maintaining the information generated in his/her area.

Selection Criteria:

MC				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
Mechanical engineering, business administration, industrial engineering or at least 2 years of proven experience in the area	<ul style="list-style-type: none"> * Working with subcontractors and suppliers * Supervising different inputs (permises, vehicles, computers, audiovisual equipment, furniture, etc.) for communitarian projects * Inventory handling * Maintenance and administration of material resources on communitarian project * PC programs 	<ul style="list-style-type: none"> * Work by objectives * Close and constant follow up of work plan and goals * Organization * Attention to details * Needs detection * Proactive * Writing reports and express him/herself in Spanish 	<ul style="list-style-type: none"> * Self motivated * Highly committed * Responsible * Honest, great thrust and initiative * Adaptable 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Selection through UNDP contracts committee

POSITION: ADMINISTRATIVE ASSISTANT (AA)

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

A. Under the supervision of the Administration Coordinator, the AA shall perform the following duties:

- 1) Prepare his/her annual and quarterly work plans to be discussed in the planning of action meetings of the Administration Coordination.
- 2) Prepare reports on the results of the area under his/her responsibility, as required.
- 3) Design and establish appropriate computer programmes to register and produce the needed reports related to his/her responsibilities.
- 4) Support the Administration Coordination in the undertaking of the following activities related to Project personnel:
 - a) Identify suitable candidates to fill all positions and subcontracts, in consultation with the corresponding technical areas and UNDP.
 - b) Lead the recruitment process of all the personnel and subcontractors in the Project, in coordination with the corresponding areas.
 - c) Establish and coordinate the local contracts committee to select the required personnel for levels under the Coordinators and subcontracts under US\$29,999.
 - d) Contract local Project staff, consultants and sub-contractors, previously authorized by the local contracts committee.
 - e) Support UNDP to contract the following personnel selected by the UNDP contracts committee:
 - i) Local Project staff for the management positions and sub-contracts beyond \$US30,000.
 - ii) Needed international Project staff decided in the UNDP contracts committee.
 - f) Create and maintain a roster of candidates for all positions in the Project.
 - g) Provide the needed administrative follow-up to all Project personnel, subcontractors and short-term consultants.
 - h) Prepare the payroll and required documentation to cover the taxes (ISPT, IMSS, SAR, INFONAVIT, etcetera).
- 5) Support the Administration Coordinator in the undertaking of the following actions, with the support of the Maintenance Chief (MC), as required:
 - a) Establish and provide equipment, furniture and utilities for Jalpan and Queretaro offices, as well as for new field offices, as needed.
 - b) Provide administrative backstopping to the office in Queretaro city.
 - c) Build and/or establish and maintain: a biodiversity monitoring center, training center, Safari Camp, etcetera.
 - d) Facilitate administrative backstopping to subcontractors and training activities supported by the Project.
 - e) Buy the vehicles, office furniture, computer and audiovisual equipment and signals to be placed in the field, needed by the Project.
 - f) Following the procedures of the purchasing committee, buy all needed parts for repairs, maintenance material and appropriate insurance for the vehicles and equipment.
 - g) Maintain a permanently updated inventory of Project office equipment and furniture.
- 6) Acts as facilitator or trainer in areas of his/her knowledge, as required.

- 7) Apply UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 8) Apply the publications criteria in all material and documents produced in his/her area.
- 9) Follow the archives criteria when creating and maintaining the information generated in his/her area.

Selection Criteria:

AA				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
At least five-year experience in business administration, psychology, industrial relations, accounting	<ul style="list-style-type: none"> * PC programs * Handling of suppliers Fair knowledge of: <ul style="list-style-type: none"> * Recruitment and selection techniques * Legal topics related to hiring process * English 	<ul style="list-style-type: none"> * Work by objectives * Common sense * Organization * Attention to details * Writing reports and express him/herself in Spanish * To relate with people 	<ul style="list-style-type: none"> * Self motivated * Committed * Responsible * Honest, great thrust and initiative * Adaptable * Service oriented 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Selection through UNDP contracts committee

POSITION: POLITICAL ALLIANCES - PAC

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Responsibilities and Duties:

A. Under the supervision of the Director General, the PAC will be responsible for:

- 1) Representing the DG in events derived from his/her position as Director of the Biosphere Reserve (consultative councils, citizens councils, field visits with state or municipal authorities, workshops, seminars, community assemblies, etcetera).
- 2) Convening, organizing and attending the meetings of the Technical Advisory Committee (TAC) to prepare the minutes, follow up the agreements and prepare the needed reports. 3.3.1
- 3) Preparing the annual operational programme (POA) to be submitted to the government. 3.3.1.b
- 4) Preparing the annual and quarterly work plans of his/her area to be discussed in the management committee.
- 5) Participating in the meetings of the management committee to discuss the Project policies and strategies, review the work plan and ensure synergy among all technical areas.
- 6) Coordinating and consolidating within the Project, the needed political alliances to achieve financial sustainability, with the support of the technical areas.
- 7) Meeting frequently with the Chief of the Resource Mobilization Unit to discuss the ongoing negotiations and to decide on lines of action.
- 8) In coordination with the Monitoring and Evaluation Coordinator (MEC):
 - a) Supporting the external evaluation activities in his/her area.
 - b) Preparing the needed technical reports of his/her area, to be submitted to the donors, government authorities, GEF and UNDP.
- 9) Preparing project proposals in his/her area to be submitted, by the Director General, to potential donors, with the support of the MEC and AC.
- 10) Authorizing payments derived from the implementation of his/her area work plan.
- 11) Participating in the recruitment process of the personnel and subcontractors in his/her area, under the coordination of the Administration Coordinator (AC).
- 12) Acting as facilitator or trainer in areas of his/her knowledge, as required.
- 13) Applying UNDP policies and procedures, within the framework of the national execution modality, to all actions under his/her responsibility.
- 14) Overseeing the application of the publications criteria in all material and documents produced by his/her area.
- 15) Overseeing the application of the archives criteria in maintaining the files of his/her Coordination

B. Under the supervision of the Director General, the PAC shall perform the following duties:

- 1) Support the Director General (DG) to:
 - a) Strengthen the Technical Advisory Committee (TAC) to transform it into a regional planning and co-ordination Committee. 3.3.1
 - i) Implement the Federal Reserve Management Plan at the bioregional level promoting mainstreaming in the four surrounding states. 3.3.1 a
 - ii) Develop and monitor an annual operational plan and budget for inter-institutional co-operation among TAC members, promoting institutional support and re-channelling of monetary funds, in collaboration with the Monitoring and Evaluation Coordination. 3.3.1 b
 - iii) Establish and oversee the operation of evaluation/technical sub-committees under TAC and prepare monthly reports. 3.3.1.c
 - iv) Perform technical field visits within the region and immediate surrounding areas. 3.3.1 d
 - b) Expand TAC participation by involving the government of San Luis Potosi and the municipality of San Joaquin in the first year. 3.3.2
 - c) Design and undertake a campaign in support of the TAC to build conservation awareness among public servants and technical advisors to enable re-orientation of public policies and redefinition of public works in the four surrounding states, with the aid of the Holistic Improvement Coordination. 3.3.3
 - d) Expand TAC focus and participation by involving the state governments of Guanajuato and Hidalgo in the fourth year, in site-specific replication activities (Phase II) 3.3.6
 - e) Support CONAP to disseminate and replicate TAC functioning as a co-ordination and mainstreaming committee (Phase II). 3.3.9
 - f) Promote the definition and enforcement of urban management, building norms and regulations safeguarding scenic integrity within the Reserve. 3.4.10
- 2) Evaluate and reinforce mainstreaming mechanisms and expand their focus to two other states (*Guanajuato* and *Hidalgo*) to attain holistic coverage of influencing activities and policies (Phase II). 3.3.5
- 3) Support the subcontractor responsible for the sustainable production strategy and programme to negotiate:
 - a) Second-tier actions related to watershed management and water services with the government of San Luis Potosi and CNA, carbon sequestration and carbon bond market development with the Office of Climate Change at CONANP (Phase II). 3.3.8
 - b) Pilot recuperation schemes for environmental services. 3.4.12
 - c) Expansion of the conservation and biodiversity protection activities to the whole reserve territory considering influence activities of the four surrounding states (*Guanajuato, Hidalgo, Queretaro* and *San Luis Potosi*) (Phase II). 3.4.15
 - d) Expansion of successful experiences in the four states via market forces and local, state and federal (especially SAGAR and SEDESOL, aside from SEMARNAT) agencies (Phase II). 5.1.16
 - e) Replication of well-performing productive experiences in influence areas of the four surrounding states with the collaboration of the state and municipal authorities (Phase II). 5.2.7
- 4) Support the subcontractor responsible for the sustainable production strategy and programme to:
 - a) Carry out the conservation and rehabilitation activities under output 3.4 (3.4.1 to 3.1.10 and 3.4.15).
 - b) Provide technical assistance and training in the context of replication of co-management best practices, and TAC enhanced functioning (this relates to services provided as part of the activity 6.1.3), in coordination with the HIC (Phase II). 4.1.7

- 5) Support the Holistic Improvement Coordination in the negotiations with local, state and federal authorities to carry out activities under output 5.5 (5.5.3, 5.5.6, 5.5.7, 5.5.10 and 5.5.11).

Selection Criteria:

PAC				
Professional Background:	Proven and successful experience and broad knowledge in:	Abilities and/or skills in the following areas:	Personal qualities:	Hiring conditions:
<p>Economy, law, international relations, communications, business administration, biology, agronomy, environmental engineering</p> <p>Preferably masters degree or Five years experience in the field</p>	<ul style="list-style-type: none"> * Negotiation with public private and academic sectors * New business promotion * Environmental policies * Sustainability of small and micro enterprises * Information geographic system * Socioeconomy and geography of the Reserve * Strategic planning * Very good knowledge of English (reading, writing and speaking) 	<ul style="list-style-type: none"> * Work by short and long term objectives * Establishment of long, short and medium term goals * Negotiation and conflict resolution * To mobilize and coordinate people * To convince * Close and constant follow up of work plan and goals * Listening * Frustration tolerance * Writing reports and express him/herself in Spanish 	<ul style="list-style-type: none"> * Extrovert * Charismatic * Responsible * Committed * Honest, great thrust and initiative * Convincing, congruent 	<ul style="list-style-type: none"> * Live in the Jalpan area or bordering zone * Availability to continuously travel in the Reserve, Queretaro and México City * Selection through UNDP contracts

Annex H: Specifications For Sub Contracts

Title: Environmental Education Strategy and Programme

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Background:

Long-term conservation in the Sierra Gorda region will only be achieved if key decision-makers in government, the private sector, and civil society are sensitized to the conservation value of the area. In cooperation with the Sustainable Development Network supported by UNDP, Grupo Ecológico Sierra Gorda (GESG) has produced a series of pamphlets, posters, brochures and maps describing the significance and value of the Reserve's biodiversity. GESG has designed an environmental education programme that has reached more than 70% of primary school students and 25% of secondary school students in Reserve municipalities. Nevertheless, this program needs to continue for the long-term as well as replicate itself within the Reserve and her zones of influence.

On the whole, public awareness of conservation values and of the relevance of conservation to development objectives is poor. GESG produces a weekly radio programme that is transmitted in the local station and in two stations in the State's capital. The group also has published columns in local and State periodicals, and has been the subject of special report at the national and international level, notably in public television. Television has been the media for a few important campaigns at the State level, and the presence acquired by this medium has been supported by diverse fund-raising events. Despite all of these actions, a wider and well-targeted educational mass media programme to impart conservation values to local children is lacking at the regional level, especially in the neighbouring areas of surrounding States.

Adequate environmental awareness has been identified as a critical component for the long-term integrity of the region. The attention to this problem has been incorporated in the Biodiversity Conservation in the Sierra Gorda Biosphere Reserve Project, whose objectives will be achieved through a mix of: management capacity strengthening, establishment of monitoring and evaluation systems together with socio-economic and biological assessments, demonstration of sustainable livelihood options and increased environmental awareness and consciousness among stakeholders in the Reserve.

There are two immediate objectives of this Project. The first is to strengthen management capacities in order to sustain efforts for the conservation and sustainable use of the Reserve's globally significant biodiversity over the long-term. The second immediate objective is to increase the value of biodiversity conservation and sustainable use so as to ensure long-term sustainability of project benefits.

The Project will be phased over seven years to allow the approaches promoted by the project to be developed gradually and agreed upon with the relevant stakeholders. This will permit the design and demonstration of overall intervention modules that can easily be replicated initially in areas with similar conditions and subsequently in other areas within the Reserve and its immediate influence areas.

Phase I will be implemented over a four-year period, and will focus conservation efforts in five of the 11 core areas, representing half of the total core area coverage. These areas were selected in accordance with a set of criteria including the globally significant biodiversity, threats, and the demonstrated abilities and commitment by the relevant communities. The first phase activities will also represent a strengthening of the enabling conditions by integrating biodiversity-friendly resource management into development frameworks (e.g., policies, plans, programmes).

Phase II will be implemented over the remaining three years of the project, and will focus on the conservation efforts for the remaining core areas of the Reserve as well as to replicate the biodiversity-friendly and sustainable alternative options demonstrated in the first phase. A specific goal of the second phase is to secure appropriate land from the neighbouring states as buffer zone to the core areas.

The first phase includes focused interventions in the Pinal de Amoles, Joya del Hielo, Cañada de las Avispas, Misión de Bucarelli and Ayutla core areas. These areas comprise 14,000 hectares of core zone and 170,000 hectares of buffer and influence zones (these buffer and influence zones incorporate bordering areas in the State of San Luis Potosi). The estimated population in these five areas is 68,500 inhabitants. Interventions will include planning, training, sustainable use demonstrations, definition of conservation set-aside modalities and awareness raising with the communities, ejidos and private landholders that occupy the territory of the project areas. In addition the project will develop crosscutting activities such as Reserve-wide awareness campaigns, strengthening of Reserve management, targeted studies and the installation of a monitoring and evaluation system.

Phase II will expand and replicate the site-specific work to include all the nucleus zones and work with the communities, ejidos and private landholders located in the respective buffer and influence areas. This Phase will also permit the inclusion of relevant influence areas of the four surrounding states (including Hidalgo and Guanajuato). Thus, at the end of the Project the entire core zones and their immediate surrounding areas will have received diversified demonstrations of alternative land use options and their economic, social and biological sustainability.

Environmental knowledge and awareness demonstrated through natural resource management in the Reserve will result from dynamic promotion activities undertaken by GESG in collaboration with educational institutions and organisations within the Reserve, reaching an estimated regular audience of 17,000 students and 22,500 adults. Environmental education will be promoted both in informal local settings and in more formal conditions at all levels. GEF support will promote alternative approaches to communicate the importance of the environment, adjusted to the particular need of specific audiences in the greater SGBR region. Project co-financing and resources from international NGO and GESG will be used to train teachers, potential community environmental brokers, and will foster exchanges between all relevant stakeholders. The project will plan and implement 21 workshops for NGOs and more than 70 workshops for other relevant stakeholders in the region utilizing distinct approaches based upon the 12 years of experience that the GESG have accumulated in their work with environmental education in the area. A team of 20 community promoters will together with a professional team of 10 people be in charge of the detailed planning and implementation of the education campaigns and training that will include both traditional stakeholders in the Reserve area and relevant stakeholders from the wider four state region with impacts upon the biodiversity of the Reserve.

A comprehensive environment awareness campaign will be implemented in the Reserve. The communication strategy will involve the use of the most effective available media, like radio. Marketing material ranging from videos to information brochures at the local, state, inter-state, national and international level will be produced and distributed to foster action, resource mobilisation, continued efforts and to improve the environmental and living conditions within the Reserve. At the local level the goal is to combine the local cultures found in the Reserve with alternative approaches to conservation and sustainable use. Systematic and methodological cataloguing of local conservation values and traditional knowledge will result in an enormous potential for replication in many other protected areas. The information generated under this output will strengthen CONABIO's database on traditional biodiversity management and use.

Phase two will allow for the extension of the awareness and environmental education activities –imparted by GESG- in a significant number of communities within the four-state region. This initiative, together with lessons learned from phase one, will enable conditions for a profound reform of proposed state educational investments and curricula in all four states in phase two. At the end of the project and in line with

CONAPANP long-term strategy for protected areas management and the raison d'être of this project, a full-scale experience-sharing campaign will be undertaken to disseminate the pilot co-management model experience.

Subcontract Objective:

Project output 6, "An environmental education and public awareness strategy and programme", will be designed and implemented under the subcontract. The development of the subcontracted work will be permanently monitored by the Holistic Improvement Coordinator of the Project. The organization will:

- 1) Design the environmental education strategy, programme and budget for the areas of influence in the Reserve, to be implemented in a seven-year period, indicating concrete accomplishments at the end of each year.
- 2) Prepare a detailed work plan and budget for the first year of Phase I, to be discussed and approved in the Management Committee of the Project. The work plan must include the two expected results under output 6 and their corresponding activities, shown in Annex 1.
- 3) Support, as needed, the Project Coordinators in all the activities related to promotional education campaigns.
- 4) Submit monthly written reports on the progress of achievements to the HIC, together with a set of the education and dissemination material produced.
- 5) Submit quarterly financial reports and the estimated budget for the next quarter.
- 6) Carry out quarterly planning and assessing meetings with the HIC to ensure compliance with the work plan and appropriate coordination with other activities in the Project.
- 7) Attend the HIC in his/her monitoring visits to the sites where the actions are being carried out.
- 8) Prepare all needed information to undergo an external evaluation at the end of each year, prior to subcontract extension.
- 9) Submit a report at the end of each calendar year, together with the work plan of the next year to be reviewed and approved by the Management Committee of the Project.
- 10) Apply GEF rules and UNDP policies and procedures, within the framework of the national execution modality, in the implementation of the subcontract.
- 11) Apply the publications criteria established in the Project to all material and documents produced through this subcontract.

Selection Criteria

Experience: The subcontract will be awarded to a non-governmental organization or private consulting firm with experience in the environmental education field and in communication and diffusion strategies and techniques.

Professional Background:

The members of the organization to undertake the consultancy must have solid and broad knowledge and experience in the environmental education field and in cross-sector/multi-stakeholder team work and must have worked in the Reserve and/or surrounding areas for at least eight years. In addition, they must have proven skills in: group training, design and elaboration of didactic material for courses and workshops, communitarian work and organization, follow up of work plan and goals, needs detection, synthesis and planning, attention to small details, management by objectives, evaluation of short and long term results and excellent ability to write and express themselves clearly and concise in Spanish.

Duration: The subcontract will be operative over the duration of the Project, subject to annual external evaluations and renewals.

Accountability: The sub-contractors will be jointly responsible to UNDP and SEMARNAT for the quality and timeliness of the products required under this subcontract and accountable for ensuring that the GEF's rules are applied, in particular those pertaining to incremental costs and public participation.

Hiring conditions:

- * The site of the organization must be Jalpan or bordering zone.
- * The UNDP contracts committee will select the organization to undertake the subcontract.

Title: Sustainable Production Strategy and Programme

Project: Biodiversity Conservation in the Sierra Gorda Biosphere Reserve

Background:

There are two immediate objectives of this Project. The first is to strengthen management capacities in order to sustain efforts for the conservation and sustainable use of the Reserve's globally significant biodiversity over the long-term. The second immediate objective is to increase the value of biodiversity conservation and sustainable use so as to ensure long-term sustainability of project benefits. These objectives will be achieved through a mix of: management capacity strengthening, establishment of monitoring and evaluation systems together with socio-economic and biological assessments, demonstration of sustainable livelihood options and increased environmental awareness and consciousness among stakeholders in the Reserve.

The Project will be phased over seven years to allow the approaches promoted by the project to be developed gradually and agreed upon with the relevant stakeholders. This will permit the design and demonstration of overall intervention modules that can easily be replicated initially in areas with similar conditions and subsequently in other areas within the Reserve and its immediate influence areas.

Phase I will be implemented over a four-year period, and will focus conservation efforts in five of the 11 core areas, representing half of the total core area coverage. These areas were selected in accordance with a set of criteria including the globally significant biodiversity, threats, and the demonstrated abilities and commitment by the relevant communities. The first phase activities will also represent a strengthening of the enabling conditions by integrating biodiversity-friendly resource management into development frameworks (e.g., policies, plans, programmes).

Phase II will be implemented over the remaining three years of the project, and will focus on the conservation efforts for the remaining core areas of the Reserve as well as to replicate the biodiversity-friendly and sustainable alternative options demonstrated in the first phase. A specific goal of the second phase is to secure appropriate land from the neighbouring states as buffer zone to the core areas.

The first phase includes focused interventions in the Pinal de Amoles, Joya del Hielo, Cañada de las Avispas, Misión de Bucarelli and Ayutla core areas. These areas comprise 14,000 hectares of core zone and 170,000 hectares of buffer and influence zones (these buffer and influence zones incorporate bordering areas in the State of San Luis Potosi). The estimated population in these five areas is 68,500 inhabitants. Interventions will include planning, training, sustainable use demonstrations, definition of conservation set-aside modalities and awareness raising with the communities, ejidos and private landholders that occupy the territory of the project areas. In addition the project will develop crosscutting activities such as Reserve-wide awareness campaigns, strengthening of Reserve management, targeted studies and the installation of a monitoring and evaluation system.

Phase II will expand and replicate the site-specific work to include all the nucleus zones and work with the communities, ejidos and private landholders located in the respective buffer and influence areas. This Phase will also permit the inclusion of relevant influence areas of the four surrounding states (including Hidalgo and Guanajuato). Thus, at the end of the Project the entire core zones and their immediate surrounding areas will have received diversified demonstrations of alternative land use options and their economic, social and biological sustainability.

Subcontract Objective:

Within the framework of the considerations indicated in the Project document (paragraphs 19, 20, 39-41, 43-44, 47, 49 and 50-57), the subcontracted organization will be responsible for the overall achievement of the results, indicated in number 2 below, under the following Project outputs:

- * Adaptive and participatory Reserve planning and management is implemented (output 3)
- * Financial sustainability of Reserve management is assured (output 4)
- * Biodiversity-friendly and sustainable alternative livelihood options are developed and demonstrated in buffer zones and areas of influence (output 5)

To this effect, the Project Sustainable Production Coordinator will supervise directly the work of the subcontracted organization and shall ensure accurate coordination of all subcontracted activities with those of the technical areas in the Project, as well as appropriate consultations with the Business and Financial Advisory Committee. The organization will:

- 1) Design the sustainable production strategy, programme and budget for the areas of influence in the Reserve, to be implemented in a seven-year period, indicating concrete accomplishments at the end of each year.
- 2) Prepare a detailed work plan and budget for the first year of Phase I, to be discussed and approved in the Management Committee of the Project. The work plan must include the three areas, related to outputs of the Project, and their corresponding activities shown in annex 1.
- 3) Submit monthly written reports on the progress of achievements to the SPC, together with a set of the material produced.
- 4) Submit quarterly financial reports and the estimated budget for the next quarter.
- 5) Carry out quarterly planning and assessing meetings with the SPC to ensure compliance with the work plan and appropriate coordination with other activities in the Project.
- 6) Attend the SPC in his/her monitoring visits to the sites where the actions are being carried out.
- 7) Prepare all needed information to undergo an external evaluation at the end of each year, prior to subcontract extension.
- 8) Submit a report at the end of each calendar year, together with the external evaluation and the work plan of the next year, for review and approval of the Management Committee.
- 9) Apply GEF rules and UNDP policies and procedures, within the framework of the national execution modality, in the implementation of the subcontract.
- 10) Apply the publications criteria established in the Project to all material and documents produced through this subcontract.

Selection Criteria

Experience: The subcontract will be awarded to a non-governmental organization or private consulting firm with proven experience in sustainable forestry management and biodiversity friendly and sustainable alternative livelihood options in buffer zones and areas of influence in the Reserve.

Professional Background:

The members of the organization to undertake the consultancy must have solid and broad knowledge and experience in:

- * Sustainable forest management
- * Sustainable production
- * Biodiversity
- * Plagues, fires and soil conservation
- * Reforestation
- * Environmental impact programs
- * Socio-economy, forestry status and geography of the Reserve
- * Wood and non-wood products trade
- * Creation and development of new business and work associations
- * Eco-tourism concepts and practice
- * Communitarian work
- * Marketing and communication techniques
- * Strategic planning
- * Contact with state, federal and local governmental agencies
- * Very good knowledge of English (reading, writing and speaking)

Abilities and/or skills:

The organization to undertake the consultancy must have staff with proven abilities and/or skills in the following areas:

- * Managing by objectives
- * Constant and close follow up of work plan and goals
- * Establishment of long, short and medium term goals
- * Negotiation and conflict resolution
- * Interdisciplinary team work
- * Integrating team work managing
- * Establish interpersonal relations
- * Mobilize and coordinate people
- * Positive and open leadership
- * Business sense and ability to promote its development
- * Proactive
- * Replicate previous learning experiences adapting them to the region
- * Writing reports and project proposals
- * Express clearly and concise in Spanish

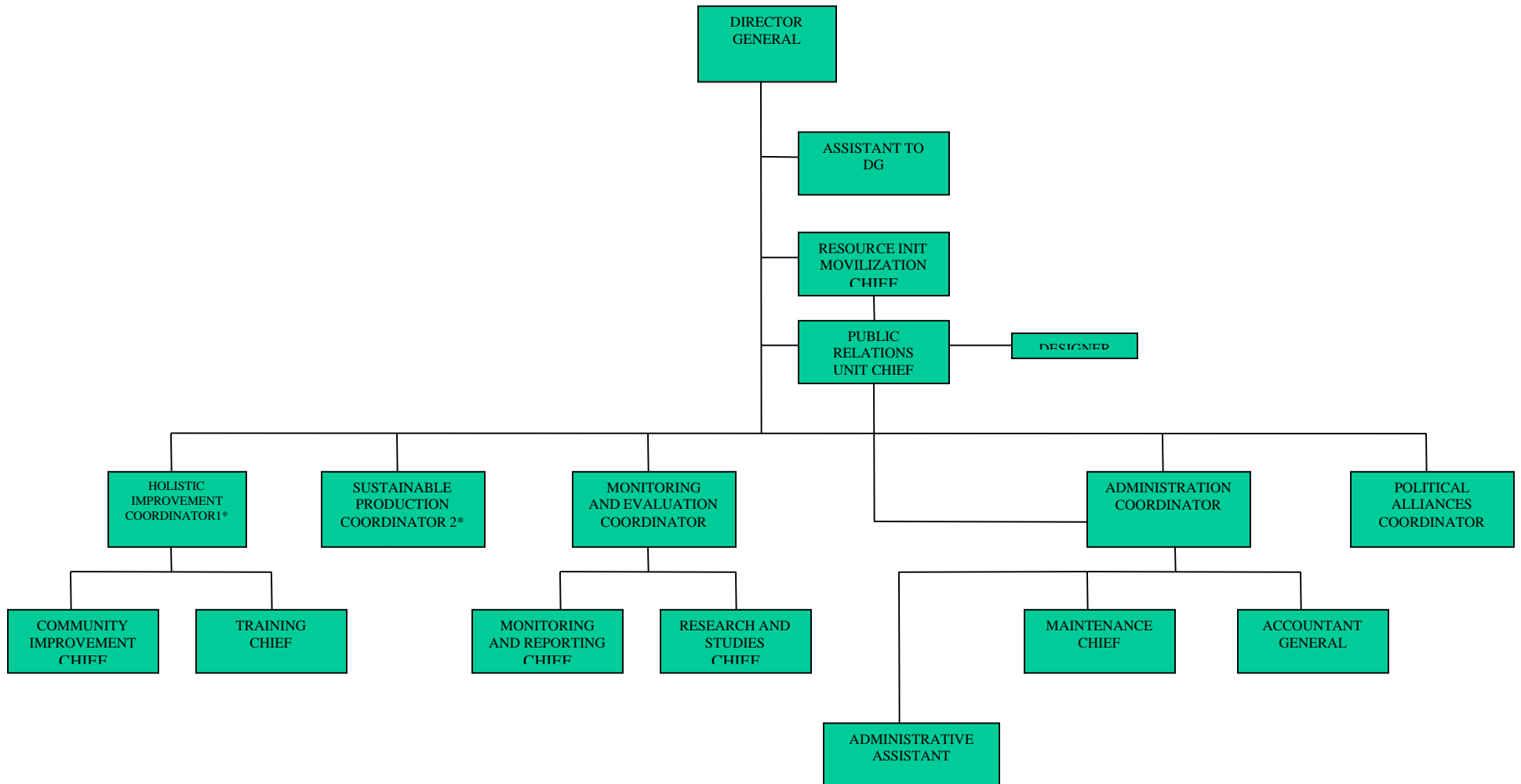
Duration: The subcontract will be operative over the duration of the Project, subject to annual external evaluations and renewals.

Accountability: The sub-contractors will be jointly responsible to UNDP and SEMARNAT for the quality and timeliness of the products required under this subcontract and accountable for ensuring that the GEF's rules are applied, in particular those pertaining to incremental costs and public participation.

Hiring conditions:

- * The site of the organization must be Jalpan or bordering zone.
- * The UNDP contracts committee will select the organization to undertake the subcontract.

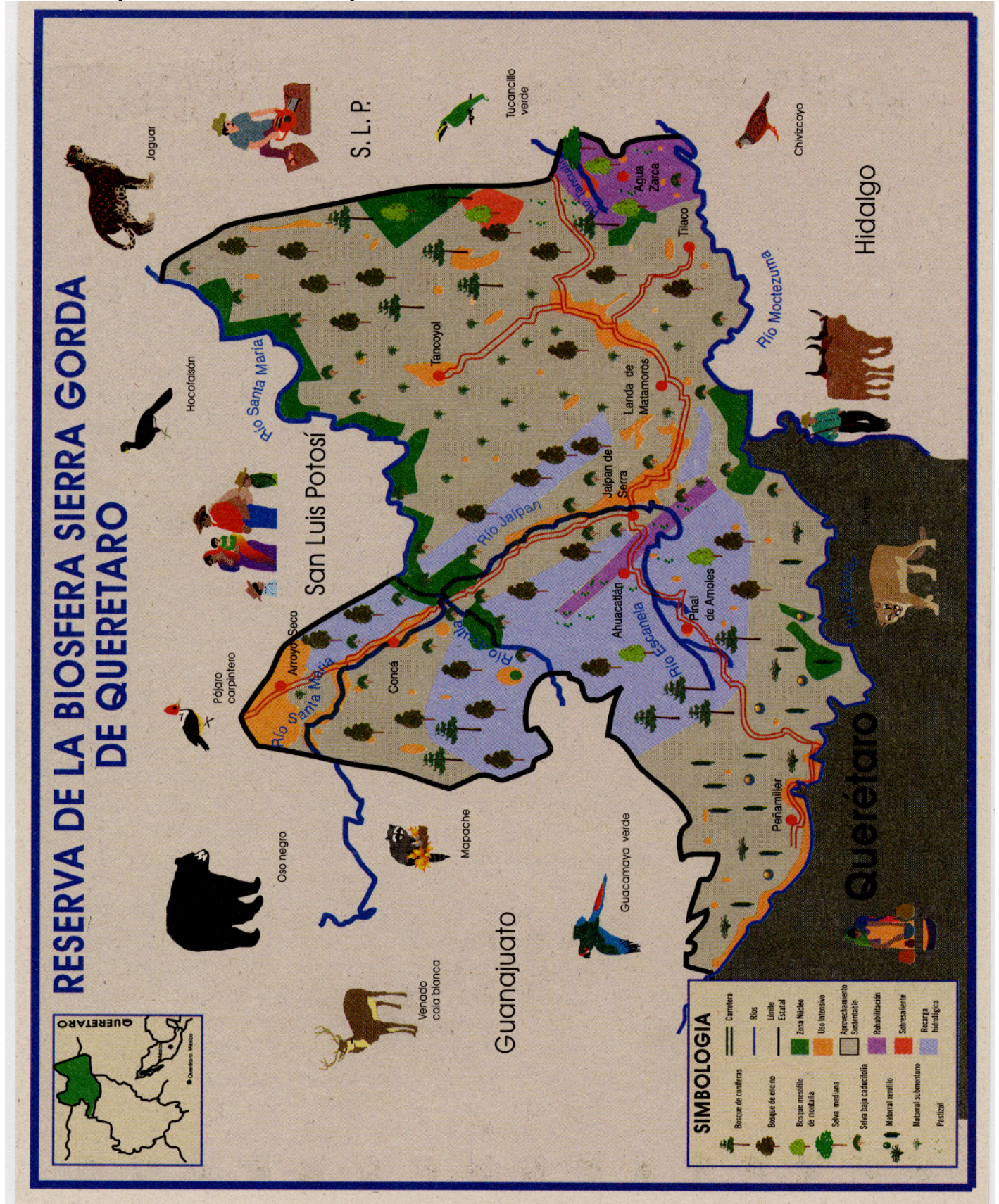
BIODIVERSITY CONSERVATION IN THE SIERRA GORDA BIOSPHERE RESERVE



*1 The Environmental Education Strategy and Programme will be subcontracted

*2 The Sustainable Production Strategy and Programme will be subcontracted

Annex I: Map of the Sierra Gorda Biosphere Reserve



Annex J: Threats/Root Causes

The Sierra Gorda Biosphere Reserve is the second most densely populated natural protected areas in Mexico. It is located at the intersection between four States (Queretaro, San Luis Potosi, Hidalgo and Guanajuato), which operate under different administrative regulation, environmental enforcement practices, human settlement patterns and land-use management schemes. These factors contribute significantly to the complexity of threats and root causes that threaten the biological diversity of the Reserve. For the Federal Reserve Management Unit (FMRU) and its diverse management bodies, this complex mosaic of policies underlines the importance of strengthening its policy negotiation capacity.

There are a variety of threats, mainly of anthropogenic origin, the impact of which can be observed from studies on the population dynamics of important species, soils and water quality, the distribution of land use patterns, and the status of habitats within and between ecosystems. The percentage of lost forest cover provides a striking indication: the Sierra Gorda Biosphere Reserve has lost a large percentage of its natural forest cover during the past few decades (at the average rate of 550 ha per year). There are five main threats to the Reserve's biodiversity, namely a) **extensive cattle and goat ranching**; b) **inefficient agricultural practices**; c) **wildfires and inadequate forest management practices**; d) **poaching**; and e) **pollution from solid wastes**.

- a) **Extensive cattle and goat ranching:** There are about 47,500 head of cattle, 19,585 goats and 21,810 pigs inside the Reserve. Cattle ranching is among the most damaging threat to the biodiversity in the Reserve, covering extensive areas and using inefficient pasture-use techniques. This has resulted in extensive over-grazing, leading to significant deforestation and land erosion throughout the Reserve, as well as contributing to the spread of alien invasive species. The total area dedicated to cattle and goat ranching in the five municipalities that constitute the Reserve is 268,342 hectares. In spite of its marginal economic return, goat ranching is extensive, damaging the soils and the natural vegetation, such as the pine groves Pinal de Amoles and the semi-arid scrub found in the Reserve. Pig farms exist in limited enclosures and, as such, do not directly damage the natural vegetation. However, wastewater from these farms does pollute the tributaries of several ecologically important rivers within the Reserve.

Root causes	Proposed actions
<ul style="list-style-type: none"> • Lack of local environmental awareness and appreciation of the values imbued in the ecosystems present in the Reserve • Perverse government/non government incentives • Inefficient livestock management practices • Lack of alternative livelihood options, leading to unsustainable, short-term resource-use practices 	<ul style="list-style-type: none"> ⇒ Increase awareness in a strategic, targeted manner ⇒ Promote change in local policies ⇒ Establish a comprehensive training programme ⇒ Provide alternative, sustainable livelihoods to liberate priority habitats from destructive pressure ⇒ Establish credits for productive alternatives

- b) **Inefficient agricultural practices:** Farming systems are characterized by very low productivity (0.4-0.8 tons/ha of corn and beans, which are the staple subsistence crops grown in the area). This is in part due to a lack of better alternatives that is evidenced by inadequate practices, such as cultivation on steep slopes, slash-and-burn agriculture and uncontrolled use of agro-chemicals. The consequences include rapid decline in soil fertility, erosion, deforestation and soil and water pollution. Due to the scattered settlements and continuous immigration, the agricultural frontier continues to expand deeper and deeper into the forested areas of the Reserve, increasing threats to many important habitats. Fruits and legumes are also cultivated in the Reserve for both commercial purposes and local consumption, and represent an

interesting alternative source of income for many communities. However, this activity lacks coordination and tends to make excessive use of chemical fertilizers.

Root causes	Proposed actions
<ul style="list-style-type: none"> • Biodiversity-friendly and sustainable agricultural development has so far been uncoordinated and tends to make an excessive use of chemical fertilizers • Lack of alternative livelihood options, leading to unsustainable resource-use practices • Insufficient knowledge of alternative agricultural technologies • Perverse governmental/ private incentives • Traditional low-impact agricultural methods forgotten/discontinued 	<ul style="list-style-type: none"> ⇒ Training on the appropriate use of agrochemicals ⇒ Establish a technical assistance and training programme ⇒ Demonstrate sustainable methods ⇒ Development of alternative livelihoods ⇒ Promote traditional agricultural practices ⇒ Induce change in local policies ⇒ Promote corporate investments in low-impact locations in the four states

- c) **Inadequate forest management and wildfires:** Of the 120,000 Ha of oak and pine forests found within the Reserve, only 13,000 hectares are currently harvested under a forestry exploitation system. There are six sawmills in the Reserve, which generate a series of forestry products and timber residues that are left unutilized. The added value given to these products is minimal, given the combination of outdated and inefficient equipment and unskilled operating personnel. The granting process for logging permits is currently very time consuming in relation to the small amounts of timber extracted, thus promoting extensive irregular and illegal logging practices. There is also substantial logging for fuelwood in areas near the local communities as well as selective extraction, especially for selected species with high market values (such as red cedar, now quite rare in the area). Forest fires are largely the result of the use of fire to clear forests for agricultural purposes. The yearly impact of forest fires varies widely. Between the period of 1993-1997, an average of 230 ha was affected each year within the Reserve.

Root causes	Proposed actions
<ul style="list-style-type: none"> • Inadequate forestry management practices • Lack of a fire prevention programme • Insufficient brigades and equipment to combat wild fires • Lack of infrastructure to prevent wild fires • Lack of alternative livelihood options leads to too many people to harvest in sensitive areas • Insufficient awareness of cumulative impacts 	<ul style="list-style-type: none"> ⇒ Design and implement a technical assistance programme to promote forestry plantations ⇒ Execute a forestation programme ⇒ Establish fire-fighting brigades ⇒ Build fire-fighting stations ⇒ Train professional personnel and communities to work ⇒ Establish equipment and facilities to prevent and control wildfires ⇒ Develop fire prevention campaigns ⇒ Increase awareness in a strategic targeted manner ⇒ Support law enforcement to prevent utilization of fires for productive purposes

- d) **Poaching:** A small number of people are charged each year for breach of hunting regulations. General knowledge of present wildlife laws and hunting regulations is lacking, and enforcement is a difficult task for the local communities. Young people from small communities often poach for domestic consumption and target practice within the Reserve. Bird and mammal species such as the white-tailed

deer and the javelina (a type of wild boar, *Jabalí de Collar*) are often poached and locals frequently hunt mountain lions, jaguars and coyote, because of the perceived threat to their livestock.

Root causes	Proposed actions
<ul style="list-style-type: none"> • Inadequate enforcement of existing regulations • Insufficient human resources to prevent illegal hunting • Insufficient conservation awareness • Lack of alternative livelihood options to prevent illegal hunting 	<ul style="list-style-type: none"> ⇒ Training and infrastructure support for enforcement ⇒ Development of baseline information on threatened/endangered species ⇒ Increase awareness through a targeted approach ⇒ Actively involve communities in enforcement efforts ⇒ Provide alternative, sustainable livelihood options to remove destructive pressure from key species ⇒ Support PROFEPA officers to undertake mandatory audits of illegal hunting

- e) **Solid waste pollution:** The total daily production of solid waste within the five municipalities of the Reserve amounts to 45 tons, which on a yearly basis represents 16,465 tons of waste. In general, this waste is compiled in outdoor garbage dumps and/or public waste-treatment plants, without proper sorting and recycling to minimize environmental impacts. This human-derived waste pollutes rivers and soils well beyond the point of its immediate release, and contributes significantly to reduce water and soil quality in significantly critical ecosystems within the Reserve.

Root causes	Proposed actions
<ul style="list-style-type: none"> • Inadequate enforcement of existing policies and laws • Lack of monitoring information to support a more proactive enforcement programme • Lack of a waste treatment management programme • Lack of environmental awareness • Use of synthetic material inputs for production 	<ul style="list-style-type: none"> ⇒ Promote change in governmental policies on waste treatment ⇒ Strengthen enforcement at the community level ⇒ Elaborate and execute an integral plan of waste management ⇒ Raising the level of awareness through educational programmes to minimize the production of recyclable wastes ⇒ A targeted campaign to discontinue the use of synthetic materials

Annex K: Stakeholder Participation Plan

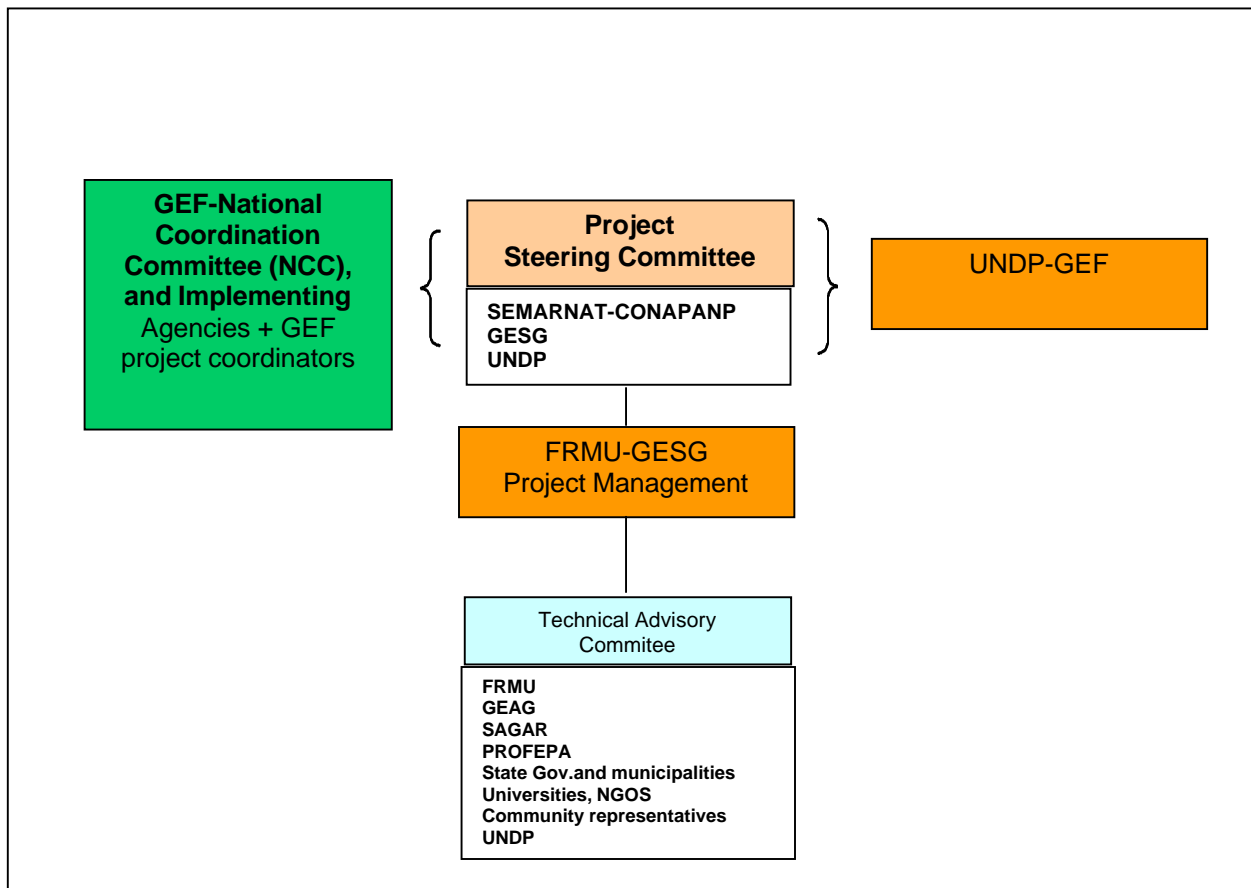
Table 1: Project execution responsibilities

Sector	Public	Non governmental organizations	Private	Social	Other*
Output 1	X	X		X	
Output 2	X	X		X	
Output 3	X	X	X	X	
Output 4	X	X		X	X

Note: “” indicates responsibility for implementation of the related activity.

*Here we place an array of organisations that also represent other interested parties

ORGANIGRAMME OF IMPLEMENTATION ARRANGEMENTS



K.1 EXPECTED STAKEHOLDER PARTICIPATION

Institution	Role in the project	Specific role for outcomes
SECTOR: Public		
<p>State Government, Municipalities, SEDESOL, SEMARNAT, CONABIO, PRONARE, SCT, SEDENA, CONAPANP, SECTUR, INE, INEGI, FONAES, and SRA</p>	<p>The project is being presented by the public sector through SEMARNAT's semi-autonomous National Commission for Protected Areas (CONAPANP). Overall project responsibility will rest with CONAPANP, and project execution will be accomplished through a public-private partnership between CONAPANP and the NGO partner. Building upon CONAPANP's comparative advantages, CONAPANP will be specifically charged with basic conservation activities, inter-agency co-ordination and enforcement issues. Several other federal authorities formally endorse this proposal, and will participate actively as seen below.</p> <p>SEMARNAT, SAGAR, PROFEPA, state and municipal governments are represented in the Technical Advisory Committee alongside community representatives, which would oversee project planning and performance, as well as ensuring strong inter-agency co-ordination of both baseline and incremental activities. Over project implementation, the TAC will be officially transformed from a largely ceremonial entity into a regional planning body.</p> <p>As it has in the past, the public sector is expected to continue to support the activities related to the basic conservation of the Reserve, by covering essential operational costs including key personnel and core funding for the protected area management plan.</p> <p>Through INE's General Director's Office for Wildlife Management (DGVS), baseline technical assistance will be provided for the establishment of Sustainable Wildlife Management Units (UMAs), for both flora and fauna species.</p>	<p><u>1. Reserve Infrastructure strengthened:</u> SEMARNAT and CONAPANP will provide technical specifications for the construction of the proposed Reserve Management Office, and will continue to provide a vehicle, basic computer equipment and other core office supplies to the FRMU. The State Government of Queretaro has invested and committed resources to strengthen the GIS for the region; INEGI also provides assistance for this system.</p> <p><u>2. Studies, targeted research:</u> SEMARNAT, INE, CONAPANP, the Government of Queretaro and GESG will carry out targeted research and rapid assessments in a complementary fashion, to update and systematise existing information. Newly compiled information will be made compatible with CONABIO's technical specifications to assure the long-term integrity and usefulness of the information generated. The States' Tourism Ministries will conduct the necessary studies and promotion activities related to tourism in the area.</p> <p><u>3. Co-management scheme operating and basic conservation undertaken:</u> SEMARNAT-CONAPANP will continue to supply timely and adequate support for basic conservation activities in the Reserve. Rehabilitation activities (reforestation, soil conservation, etc.) will be geographically concentrated on the basis of targeted technical studies. Reforestation activities that occur both within and around the PA will continue to be a federal initiative, with support being provided by a number of Secretariats through the provision of trees and equipment, fieldworkers' daily</p>

Institution	Role in the project	Specific role for outcomes
	<p>In addition to direct support for the FRMU, SEMARNAT will contribute to the project by supporting other environmentally-oriented investments and activities including waste recycling, latrine construction, fire control and prevention, erosion control, soil improvement, watershed protection and temporal employment programs</p> <p>A series of activities are granted through the public sector with various types of in-kind support that can be re-oriented to attend to project necessities, as in the case of the Agrarian Reform Secretariat and resolution of land tenure conflicts.</p> <p>.</p>	<p>remuneration and per diem, transportation, equipment and materials storage and hauling.</p> <p>The proposed co-management scheme is the backbone of this proposal. The State Government of Queretaro, SEMARNAT, INE and now CONAPANP have been and will continue to be instrumental in assisting and promoting the establishment of institutional linkages between governmental entities and the GESG.</p> <p><u>4. Financial sustainability attained:</u> CONAPANP will promote the expansion of GESG-provided technical services and consulting to other NGOs that actively participate in SINAP conservation activities. Other government entities will include GESG in rosters of service providers for sustainable use and environmental education efforts.</p> <p><u>5. Sustainable livelihood alternatives:</u> INE's Director General's office for Wildlife Management will provide technical advice and legal registration of the proposed demonstrative UMAs under this component. PRONARE will co-ordinate reforestation efforts of all of the involved government entities. Temporal employment programmes of SAGAR, SEDESOL and SCT will be used to finance some conservation activities. SAGAR and SEDESOL currently provide incentives, subsidies and credits to support the agriculture sector and micro-enterprises, respectively. Regular incentive and subsidy programs of these two secretariats will be reoriented to support program goals.</p> <p><u>6 Environmental education and awareness :</u> Government educational entities will continue to support and expand the role of GESG in providing environmental education services to the broader SGBR landscape, and the integration of specialised curricula in</p>

Institution	Role in the project	Specific role for outcomes
SECTOR: Non Governmental Organisations		primary and secondary education.
GESG, Joya de Hielo, A.C., FMCN, FAUNAM, PG7, Fundación Wilde Gansen, Fundación Kelloggs, TAC.	<p>The project is being presented by SEMARNAT and will be co-executed by the semi-autonomous CONAPANP (through their local Reserve Directorate) and the Sierra Gorda Ecological Group. CONAPANP has endorsed this project as part of its overall strategy to create in situ, financial and technical capacities for biodiversity conservation, and as proposed, it also fits well with the government’s decentralisation efforts. The proposed co-management scheme is one of the crucial elements of the project, and it is expected that lessons learned will provide for wide replicability within the SINAP and in particular in protected areas with intensive NGO presence. Under the project, GESG will be responsible for participatory planning and management in the Reserve and wider landscape, as well as all of the project aspects related to social consensus-building and community development. This co-implementation arrangement takes advantage of the institutional strengths of the partners, and compensates for identified weaknesses through adaptive management practices.</p> <p>Other NGO partners will provide financial support to a series of activities and specific projects, including support in kind. They represent the means to obtain volunteers, and will provide advice preferential prices for products, market access and will document best sustainable use practices. Specialised NGO will be engaged for specific tasks, such as carrying out targeted research or studies as well as to provide complementary support to GESG during project implementations. NGOs will also be tapped to seek and develop new sources of support for project goals through their donor networks and own competitive advantages. NGOs will help document project achievements and will benefit from practical applications of lessons learned.</p> <p>GESG in particular will see its operational mandate increased to</p>	<p>1. <u>Reserve infrastructure enhanced:</u> GESG will provide in-kind support for the construction of the new environmental education centre, and will liberate office space currently on loan to SEMARNAT/CONAPANP to house the SGBR management team. Existing infrastructure will be enhanced through purchase of specialised equipment and more thorough demarcation.</p> <p>2. <u>Studies targeted research:</u> Existing studies, many of which have been carried out by NGO actors will be compiled and updated. It is likely that NGOs such as Joya de Hielo, A.C., PG7, A.C. and GESG itself will carry out specific studies. CONABIO will provide training on specimen selection and documentation in order to ensure compatibility with the National Biodiversity Information System.</p> <p>3. <u>Co-management scheme operating and basic conservation:</u> The co-management scheme forms the backbone of the proposal, and consists of joint project implementation between GESG and CONAPANP.</p> <p>4. <u>Financial sustainability attained:</u>The GESG will develop and implement cost-recovery training programmes for other NGOs on conservation and restoration activities. FMCN will provide training on administrative practices and fund management.</p> <p>5. <u>Sustainable livelihood alternatives:</u> NGOs will be in charge of promoting the execution of activities conceived to further alternative uses and product diversification, such as the use of forests for carbon</p>

Institution	Role in the project	Specific role for outcomes
	<p>include the neighbouring states of Guanajuato, Hidalgo and San Luis Potosi. Its Savings and Sustainability Fund will be enhanced and expanded to provide technical assistance and consulting services to a wide range of stakeholders.</p>	<p>sequestering, the establishment of forest plantations and eco-tourism, among others. The provision specialised consulting and the execution of specific components of the project are areas contemplated for NGO involvement</p> <p><u>6. Environmental awareness:</u> The non-governmental sector, lead by the GESG, will expand their involvement in environmental awareness raising and use their established links to disseminate the achievements of the project on an expanded and more complex scale. Best practices will be documented and applied in other regions of the country.</p>
<p>SECTOR: Private organisations</p>		
<p>Cummins, Hewlett-Packard, COPARMEX, Cannon, and others directly or indirectly interested in the sustainable use of natural resource areas</p>	<p>Private entrepreneurs and businesses as well as private sector organisations have either already supported previous activities or expressed the likelihood of their financial support.</p> <p>Typical activities would include tagged funds for conservation projects, purchase of conservation set-asides, financial management and commercial operation of nurseries and support for environmental awareness. Under the project, other opportunities will be presented such as nurseries, rehabilitation, habitat protection, water management, resource management, organic or sustainable production, seed funds for productive activities, promotion and information disclosure, and environmental education efforts which are still limited, but are expected to grow. They also would contribute with non-tagged funding and in-kind donations.</p> <p>These organisations will provide economic support for diverse activities and specific, commercial ventures. They will also</p>	<p><u>1. Reserve management infrastructure improved:</u> Corporate partners will be sought out to provide both in-kind and cash co-financing for this component. Negotiations are well advanced for donations of construction materials and minor office hardware.</p> <p><u>2. Studies, targeted research, rapid assessments:</u> Local private sector actors will be surveyed to compile existing information on natural resources in the region, especially regarding the forestry sector.</p> <p><u>3. Co-management regime developed, conservation activities undertaken:</u> Private sector partners will be further engaged through GEF support to participate in conservation activities. Local service providers for conservation and restoration technologies and practices –including agro-enterprises- will be created, building markets for national goods and services.</p>

Institution	Role in the project	Specific role for outcomes
	<p>provide in-kind support for activities such as transportation, volunteers, equipment, use of installations or infrastructure, out-of-house work and materials and publications, etc.</p> <p>Private individuals, both local small holders and external parties, will provide support for new conservation set-asides and possible nucleus zones through the existing land purchase program managed by GESG.</p>	<p><u>4. Financial sustainability achieved:</u> Private sector actors will pay brokerage fees to GESG for project placement in communities and with small holders. Seed funds will be established in the SSF to help identify and develop ideas for new commercial ventures.</p> <p>Key members of the private sector will be incorporated into a steering committee on finance and programming for the SSF. Business plans will be developed accordingly. Advice on standard business practice, commercial risks and accounting will be imparted to GESG.</p> <p><u>5. Sustainable livelihood alternatives:</u> Private sector partners will participate in commercial ventures with small holders, especially in the development of high-yield forestry plantations. Development of eco-tourism ventures and carbon sequestration will be partially financed through private sector participation.</p> <p><u>6. Environmental awareness:</u> Private sector parties will receive awareness-raising courses imparted by GESG on waste-reduction, sustainable natural resource exploitation and community dynamics in the SGBR greater landscape. Private sector entities will be encouraged to be good corporate neighbours.</p> <p>They will provide support for alternative productive activities, education and broadcasting of results and on-going efforts.</p>
SECTOR: Social		

Institution	Role in the project	Specific role for outcomes
organizations and entities		
Communities, Local Farmers' Organizations and the Sierra Gorda Patronage	<p>The local communities will jointly provide the working force necessary for project implementation, as also the land on which project activities will be carried out.</p> <p>Furthermore, they test and adopt initiatives, through pilot projects for communal improvement, environmental education, and promotion of biodiversity-friendly sustainable development. Reforestation, forest fire control and combat, management of solid waste, watershed rehabilitation and erosion control activities are likely to be developed..</p> <p>The community will also support the GESG in activities such as patrolling, combating forest fires, erosion control, and reforestation efforts.</p> <p>They will also support and promote the mainstreaming process at the three levels of government actions. A major input of the social sector resides in the endorsement of project initiatives.</p> <p>The GESG will be responsible for developing and co-ordinating corresponding activities that the community as a whole will be in charge of implementing.</p>	<p><u>2. Studies, targeted research:</u> Communities will assist GESG and FRMU in increasing knowledge on the region's biodiversity, by participating in key studies, and by learning and applying specimen collection and reporting techniques.</p> <p><u>3. Co-management regime developed, conservation activities undertaken:</u> Communities will participate in the mixed committees for natural resource monitoring, compliance and enforcement.</p> <p><u>4. Financial sustainability attained:</u> Participating communities will compensate GESG for providing technical assistance and other services.</p> <p><u>5. Sustainable livelihood alternatives:</u> Participating communities will be principal partners in the execution of sustainable development projects and productive diversification, especially for the establishment of the high-yield forestry plantations. A roster of communities interested in implementing eco-tourism, candle fabrication and sustainable wildlife units will be prepared and constantly updated during project implementation. Continuous training efforts and public consultations will be carried out in order to accurately gauge public response to alternative livelihoods, and to point out possible deficiencies in the stakeholder consultation process.</p> <p><u>6. Environmental awareness:</u> Local communities will be the main beneficiaries and active participants in formal and non-formal environmental education activities, as also in the safeguarding of the traditional knowledge and local uses of biodiversity. Successful community</p>

Institution	Role in the project	Specific role for outcomes
		experiences will be documented and replicated, and workshops will be used to impart these experiences to other communities.
SECTOR: Others		
Inter-American Foundation, FANCA/NAFTA, IDB's MIF, Embassies, Artists and Public Figures, private individuals	<p>A number of other entities are expected to support activities related to the conservation of the Reserve and those of GESG.</p> <p>Both within and around the PA, these entities will also re-enforce reforestation activities (provision of trees and equipment, fieldworkers' salaries and daily compensations, transportation, equipment and materials storage and hauling.</p> <p>Other means of support will be their contributions to financing other environmentally oriented investments and activities, such as waste recycling, latrines, fire control and prevention, erosion control, soil improvement, watershed protection.</p>	<p>4. <u>Financial sustainability</u>: Individual contributions, volunteer work, fundraising efforts, cash and in-kind donations for the SSF and other activities have been received and will be expected in the years to come.</p> <p>5. <u>Sustainable livelihood alternatives</u>: It is expected that the NAFTA's North American Environmental Project Fund FANCA will be able to provide small grants and some research funds for alternative productive methods. Likewise, IDB's Multilateral Investment Fund has been engaged in initial discussions on financing for small enterprises and productive projects in later stages of the project.</p> <p>3. <u>Environmental awareness</u>: endorsement and promotion of a new environmental culture revolving around the Reserve by public figures (such as artists and others) will represent a major input to the project.</p>

Annex L: Site biodiversity

Introduction

The Sierra Gorda Biosphere Reserve harbours a variety of biological representations considered to be of global importance. It is located at the convergence of two eco-regions (Dinnerstein et al. 1995): the Sierra Madre Oriental pine-oak forest and the arid Central Mexican Plateau. According to Dinnerstein the first is considered as regionally outstanding and of high priority, while the latter is considered endangered and of moderate priority at a regional scale. The diversity of the natural resources found in the region is fundamentally due to the geographic convergence in this region of both Neotropic and Holartic Biotas, thus making Sierra Gorda one of the most important and well preserved transition zones between two biogeographic zones. In the 8 major ecosystems found in the region, alpha diversity is high in some, intermediate in others. Nevertheless the combined beta and gamma diversity count is high in all cases, so the total number of species found in the Reserve is remarkable considering its size. The conservation, education and sustainable use components of this project look for the comprehensive preservation of these magnificent ecosystems and species, while proving the existence of the Biosphere Reserve as a benefit for local inhabitants.

Ecosystem Diversity

The Sierra Gorda Biosphere Reserve presents an extensive mosaic of ecosystems caused by a great altitudinal gradient and a very heterogeneous rain pattern, that create notoriously high gamma diversity. Within the limits of SGBR 8 major ecosystems occur: Tropical Dry Forest, Tropical Sub-deciduous Forest, Tropical Rain Forest, Conifer Forest, Pine-Oak Forest, Oak Forest, Cloud Forest, Xerophyllous scrubs, and Riparian ecosystems. With the exception of the Tropical Rain Forest, which covers a surface of approximately 500 hectares, all the rest of the ecosystem include different plant communities.

Tropical dry forest: This is the most important ecosystem in the Reserve, covering more than 145 000 hectares, and in most cases the representations are well preserved. This ecosystem is very fragile to disturbance, with low levels of resistance and resilience. Shallow soils are common, and therefore, restoration is complex and expensive. This kind of ecosystem is found between 300 to 1400 meters above sea level

Tropical sub-deciduous forest: This ecosystem covers small plots, and covers around 5,000 hectares of the Reserve. It is found in the canyons of the most important rivers that flow in the Reserve.

Tropical rain forest: With a very restricted distribution and no more than 500 hectares, this ecosystem is important as an example of the humid ecosystem that existed in the neighboring states 50 or more years ago, and it is the most northern remaining patch in the country. This ecosystem harbours several endangered species.

Oak forest: This kind of ecosystem is commonly found between 800 to 3100 meters above sea level, and covers approximately 61 500 hectares. Within this altitude gradient there is an important species substitution process that generates a change in dominant species. At least, 3 different plant communities have been identified, depending on the altitude. In intermediate altitude lands, the following species dominate: *Quercus crassifolia* and *Q. greggii*. *Quercus mexicana* and *Q. castanea* dominate in altitudes from 2200 to 3100 above sea level. In more humid habitats, and sometimes closer to cloud forests, the oak forest is dominated by *Quercus affinis*. Low lands are primarily covered by *Q. polymorpha*.

Conifer forest: This ecosystem dominates the higher altitude regions of the Reserve, with a total surface of approximately 22 250 hectares. This is one of the vegetation types exposed to higher risk of destruction or

deterioration, because of the high market prices fetched for its timber products, and because of the current demand for fuel wood and timber for construction purposes. 19 different conifers species are found in the Reserve, most of them being trees. The plant communities of this kind can be classified, according to the dominant genus. In the Sierra Gorda Biosphere Reserve, there are 4 plant communities among conifer forests that are:

Pine forest: With more than 19 000 hectares in the reserve, the pine forest of Sierra Gorda is found in an altitude and humidity gradient responsible of the species interchange. Within this gradient, 10 pine trees species exist. The dominant species varies with altitude. Some of the stands are pure, while other are mixed with *Juniperus sp.*, *Abies sp.*, and *Quercus sp.*

Juniper forest: The stands with dominance of *Juniperus sp.* are relatively small, covering approximately just 2 750 hectares. This vegetation type is commonly found between 1500 to 2500 meters above sea level, and functions as a transition zone between arid vegetation and pine-oak forest. Two species of *Juniperus* exist in the Reserve.

White cedar forest: This forest covers around 1,500 hectares of the SGBR. Nevertheless, is very important due to the dominance of *Cupressus lusitanica*, which is an endangered species with special protection status under Mexican laws, and a species included both in CITES and IUCN lists. The altitude gradient for this specie ranges from 1600 to 2600 meters above sea level.

Fir forest: Located in altitudes ranging from 2200 to 3100 meters above sea level, this forest is dominated by *Abies guatemalensis* and *A. religiosa*, both endangered and included in CITES and IUCN. Also, *Pseudotsuga menziessi* is found in this kind of vegetation.

Pine- oak forest: Important areas of the Reserve (approximately 38 000 hectares) are covered with mixed stands, basically Pine Oak forest, with *Pinus greggii*, *P. Teocote*, *P. patula*, *Quercus laurina*, *Q. obtusata* and *Q. affinis*.

Oak forest: 31 species of *Quercus* (Oak trees) are found in the Reserve, in communities that occur in altitudes ranging from 800 to 3100 meters above sea level, that cover at least 61 000 hectares in all municipalities. In low lands, between 1200 to 2300 meters above sea level, *Quercus mexicana* and *Q. catanea* dominate, while *Q. crassifolia* and *Q. greggii* do so in higher altitudes. Below 1200 meters above sea level, *Q. polymorpha* is the principal specie.

Cloud forest: Located in humid regions, this ecosystem is particularly rich in terms of species, since it harbors species both from tropical and temperate biota's. Its extension within the Reserve is about 10 000 hectares, with *Quercus sp.*, *Liquidambar sp.* and *Cupressus sp.*, as the genus that dominate the arboreal layer; endangered species as *Magnolia dealbata*, *M. schiedeana* and *Taxus globosa*. It is important to realize that the moist forest in neighboring areas are either fragmented or destroyed, so the Sierra Gorda cloud forest are increasingly important as refuges for representatives of important flora and fauna.

Xerophyllous scrubs: The plant communities that exist in the semiarid lands in the southwest of the SGBR, are dominated by scrubs and cover more than 64 000 hectares. This vegetation type is of particular importance, since in the last glacier period (Wisconsin Glaciation) this area served as a refuge for the Chihuahua Desert. Therefore, this area constitutes a germplasm reserve, and a region for species development of cacti. For such reasons, this kind of vegetation represents high levels of endemism. The altitude variation and humidity among these hectares propitiate the establishment of 4 different plant communities, which are:

Crasicuaulescent scrubs: This vegetation is dominated by cacti, both globose or cylindrical that grow in altitudes from 1400 to 2500 meters above sea level. *Echinocactus grandis*, *Lophophora diffusa* and *Stenocereus dumortieri*, are some of the species present.

Microphyllous scrubs: Only small patches of the reserve are covered with this vegetation, that typically grows between 900 to 1,400 meters above sea level. The vegetation is very sensitive to cold weather conditions and cannot resist frost. The average annual temperature within the zone occupied by this ecosystem is between 18 to 22 degrees celsius. *Larrea tridentata*, *Condalia mexicana* and *Fouqueira splendens* are among the most prominent species

Piedmont scrubs: This vegetation occurs in a very limited area of the Reserve, at the base of the mountains and in chalk soils, between 800 to 2200 meters above sea level. It is also found in some deep ravines and in some mountain slopes. This scrub is more dense and humid than other scrubs found in the reserve. *Acacia sp.*, is the dominant genus.

Rosetophyllous scrubs: Found only in very restricted areas of the Extoraz River watershed, this scrub grows between 1600 to 2200 meters above sea level. *Fouqueria splendens*, *Agave lechuguilla* and *Dasylyrion acotriche* are among its most prominent species.

Oak tree scrubs: This is a unique plant community, covering a very small surface within the reserve and characterized by extreme weather only on the top of the two highest peaks. Besides oaks, *Litsea sp.* is also found.

Riparian vegetation: In small portions of the Reserve, these communities grow by the rivers. The importance of it is that the plant species found here are very different from those growing on adjacent lands, thus incrementing the species richness of the region.

Plant Diversity:

In the Sierra Gorda Biosphere Reserve and adjacent lands, a list of plant species reports a total of 1724. When considering this data, it is important to remember that several regions within the Reserve have not been studied in depth, so the number of species might increase. Indeed, two new species were found in the most recent biological surveys. One new not yet described species of *Magnolia sp.*, was found and also *Velascoa recondita*, which is not only a new species but a new and endemic genus found only in the core zone of Cañada de las Avispas, and described in 1997.

Of these 1724 species of plants, 25 are considered within different protection status by Mexican law: 11 as threatened 5 as endangered and four under special protection.

The surveys for macromycetes is far from finished, 124 species have so far been described. Of those, five are considered under protection by Mexican law.

Dinnerstein *et al.*(1995) considered the Sierra Madre Oriental conifer, oak and cloud forest of high conservation priority due to their high levels of endemism, lack of proper studies and high destruction rates.

Among the species in danger of extinction are : *Echinocactus grandis* (Cactaceae), *Diospyros riojae* (Ebenaceae), *Litsea glaucescens* (Lauraceae), *Magnolia dealbata* (Magnoliaceae) and *Abies guatemalensis* (Pinaceae).

Among threatened species are *Magnolia schiedeana*, (Magnoliaceae) *Dioon edule* (Cycadaceae), *Taxus globosa* (Taxaceae), *Cupressus lusitanica* (Cupressaceae), *Cedrela dugesii* (Meliaceae), *Dalbergia paloescrito* (Fabaceae) *Bursera zimapana*,(Burseraceae) *Fouquieria fasciculata* (Fouquieriaceae),

Lophophora diffusa (Cactaceae), *Neobaubamia polylopha* (Cactaceae), *Yucca queretaroensis* (Agavaceae), *Pinguicola acnata* *Pinguicola montezumae* (Lentiburaliaceae), and *Velascoa recondita* (Crossosomataceae).

Despite the fact that the botanical inventories are not complete, four species of *Bursera*, 27 species of cacti, *Cupressus lusitanica* (Cupressaceae), *Abies guatemalensis* (Pinaceae), *Ceratozamia hildae*, *C. mexicana*, *Dioon edule*, *Zamia fischeri* (Cycadaceae), *Echeverria semivestita* (Crassulaceae), several species of *Quercus*, 1 species of *Fouquieria* (Fouquieriaceae), *Yucca queretaroensis* (Agavaceae), can be considered as global significant, either because being endemic, at risk, or both.

In the Reserve, important food and medicinal plants are found. Some of the principal families are *Cucurbitaceae*, with 14 species and 9 genus reported, from which 5 species are close relatives to important crops like pumpkin and zucchini. Four species of beans (Fabaceae), *Phaseolus coccineus*, *P. formosus*, *P. leptostachyus* and *P. pedicellatus* are also close relatives to *P. vulgaris*, the common bean. The Solanaceae family, with 26 species, includes 16 wild relatives to potato, and 2 species of chili (*Capsicum annum* and *C. ciliatum*) and two species of *Salvia*, and local races of *Zea mais* among the most important species or races of food plants. Also, genus *Ipomea* with 19 species, wild relative of sweet potato and yam. *Amaranthus chihuahuensis* and *A. spinosus*. *Prunus serotina*.

With regards to medicinal plants, Sierra Gorda hosts 4 species of *Valeriana* (Valerianaceae) 4 species of *Verbena sp.*, (Verbenaceae) 2 species of *Tillandsia sp.*, (Bromeliaceae), 2 species of *Salix sp.*, (Salicaceae), 3 species of *Passiflora sp.*, (Passifloraceae) are known to have medicinal use among locals. Nevertheless, basic research is needed to identify the full potential of SGBR in this subject.

Mammal diversity

A total of 131 species of mammals have been reported for SGBR (richest diversity among the natural protected areas of México), of which at least 22 can be classified as globally significant. No clear information exists about the distribution of the species within the Reserve, but it is probably heterogeneous, depending on the size and the habits of each species. Rare species, like big cats (the six Mexican species of cats occur in Sierra Gorda Biosphere Reserve) *Panthera onca* (jaguar) or *Puma concolor* (puma) are probably distributed in larger areas of the Reserve and neighboring municipalities, while some others, like the spider monkey *Ateles geoffroyi*, it may be already extinct in the area. 19 species are listed in CITES and 11 in UICN red list.

Bird diversity

Depending on the author, between 250 to 363 bird species have been recorded for SGBR, among which 37 are considered of global importance and included in CITES. According to the Center for the Study of Tropical Birds, within the Sierra Gorda Biosphere Reserve the highest conservation priority is the conservation of the bearded - wood partridge *Dendrortyx barbatus*. In addition there are other endemic species also in great danger of extinction due to habitat loss, that are also considered as critically endangered. Also found within the Reserve is an important Military macaw (*Ara militaris*) population, one of the very few that still remain in the country. Finally, 74 bird species are protected under Mexican law.

Table 1. Importance of Sierra Gorda Biosphere Reserve fauna in the national context (number of species).

Group	SGBR	National total	Percent
Reptiles	71	750	9.5
Mammals	131	452	29
Amphibians	23	290	8

Bird	363	1050	34.28
Butterflies	700	2000	35

Table 2. The ecosystems included in the Sierra Gorda Biosphere Reserve GEF project

Ecosystem	Habitats or vegetation types	Plants	Mammals	Birds	Others
Tropical Dry Forest		<i>Bursera fagaroides</i> <i>Bidens odorata</i> <i>Senecio spp.</i> <i>Tagetes lucida</i> <i>Ipomea tricolor</i> <i>Cesalpinia pulcherima</i> <i>Jatropha dioica</i> <i>Crotalia pumila</i>	<i>Pecari tajacu</i> <i>Puma concolor</i> <i>Panthera onca</i> <i>Nasua narica</i> <i>Dasybus novem cinctus</i>	<i>Ara militaris</i> <i>Falco peregrinus</i> <i>Crax rubra</i> <i>Ortalis vetula</i> <i>Trogon elegans</i>	<i>Crotalus durissus</i> <i>Toluca lineata</i>
Tropical Semideciduous Forest		<i>Pseudosmodium multifolium</i> <i>Cordia sp.</i> <i>Bursera simaruba</i> <i>Solanum diflorum</i> <i>Ficus rzedowskii</i>	<i>Panthera onca</i> <i>Nasua narica</i> <i>Leopardus pardalis</i> <i>Felis yagouaroundi</i>	<i>Falco peregrinus</i> <i>Ara militaris</i> <i>Amazona viridigenalis</i> <i>Glaucidium gnoma</i>	<i>Crotalus durissus</i>
Tropical Rain Forest		<i>Piper hispidum</i> <i>Pouteria zapota</i> <i>Brosimum alicastrum</i> <i>Ceiba pentandra</i> <i>Cedrela odorata</i>	<i>Ateles geoffroyi</i> <i>Agouti paca</i> <i>Panthera onca</i> <i>Eira barbara</i> <i>Coendu mexicanus</i>	<i>Amazona autumnalis</i> <i>Ramphastos sulphuratus</i> <i>Pionus senilis</i>	<i>Boa constrictor</i> <i>Geophis latifrontis</i> <i>Hemidactylus frenatus</i>
Conifer Forest	<i>Pinus</i> Forest <i>Cupressus</i> Forest <i>Abies</i> Forest <i>Juniperus</i> Forest	<i>Pinus patula</i> <i>Pinus ayacahuite</i> <i>P. montezumae</i> <i>Cupressus lusitanica</i> <i>Abies guatemalensis</i> <i>Juniperus flaccida a</i>	<i>Puma concolor</i> <i>Linx rufus</i> <i>Odocoileus virginianus</i> <i>Procyon lotor</i> <i>Pappogeomys neglectus</i>	<i>Rhynchopsitta terrisi</i> <i>Cyanocitta stelleri</i> <i>Trogon mexicanus</i>	<i>Crotalus sp.</i>
Pine - Oak Forest		<i>Pinus greggi</i> <i>Pinus teocote</i> <i>P. pinceana</i> <i>Q. oleoides</i> <i>Q. laurina</i>	<i>Puma concolor</i> <i>Linx rufus</i> <i>Peromyscus gratus</i>	<i>Rhynchopsitta terrisi</i> <i>Buteo jamaicensis</i> <i>Trogon</i>	

				<i>mexicanus</i>	
Oak Forest		<i>Quercus mexicana</i> <i>Q. castanea</i> <i>Q. crassifolia</i> <i>Q. gregii</i> <i>Q. polymorpha</i>	<i>Puma concolor</i> <i>Linx rufus</i>	<i>Penelope purpurascens</i> <i>Melanerpes formicivorus</i> <i>Myadestes occidentalis</i>	
Cloud Forest		<i>Magnolia schiedeana</i> <i>Magnolia dealbata</i> <i>Tila mexicana</i> <i>Ceratozamia mexicana</i>	<i>Coendu mexicanus</i> <i>Mazama americana</i> <i>Leopardus weidii</i> <i>Galictis vittata</i>	<i>Dendrortix barbatus</i> <i>Penelope purpurascens</i> <i>Xiphocolaptes promeropirhynchus</i>	
Semiarid lands vegetation (scrubs)	Crasicalescent Scrubs Microphyllous Scrubs Rosetophyllous Scrubs Oak tree Scrubs	<i>Stenocereus dumortieri</i> <i>S.queretaroensis</i> <i>Opuntia imbricata</i> <i>Acacia vernicosa</i> <i>Larrea tridendata</i> <i>Agave lechuguilla</i> <i>Hectia glomerata</i> <i>Arctostaphylos pungens</i> <i>Fouqueira fasciculata</i>	<i>Urocyon cinereoargenteus</i> <i>Bassariscus astutus</i> <i>Canis latrans</i>	<i>Falco peregrinus</i> <i>Geococcyx californianus</i> <i>Phainopepla nitens</i>	
Riparian Vegetation		<i>Taxodium mucronatum</i> <i>Platanus mexicana</i> <i>Salix taxifolia</i>	<i>Lontra longicaudis</i>	<i>Ceryle alcyon</i>	<i>Crocodylus acutus</i>

Table 3. Sierra Gorda plant and animal species of global importance

Species	List of inclusion	Status
<i>Mammals</i>		
<i>Galictis vittata</i>	NOM	Threatened
<i>Eira barbara</i>	NOM, UICN	vulnerable
<i>Mustela frenata</i>	CITES	
<i>Lontra longicaudis</i>	NOM, CITES	Threatened
<i>Potos flavus</i>	NOM	Rare
<i>Ursus americanus</i>	NOM, CITES	Endangered
<i>Panthera onca</i>	NOM, CITES, UICN	Almost threatened
<i>Puma concolor</i>	NOM, CITES	

<i>Linx rufus</i>	NOM, CITES	
<i>Felis yagouaroundi</i>	NOM, CITES, UICN	Endangered
<i>Leopardus weidii</i>	NOM, CITES	Endangered
<i>Leopardus pardalis</i>	NOM, CITES, UICN	Endangered/D1
<i>Pecari tajacu</i>	NOM, CITES	
<i>Pappogeomys neglectus</i>		Endemic to the Region
<i>Diphylla ecaudata</i>	UICN	Almost threatened
<i>Leptonycteria curasoae</i>	UICN	Endangered/A1cd
<i>Leptonycteria nivalis</i>	UICN	Vulnerable/A1cd
<i>Plecotus townsendii</i>	UICN	Vulnerable/A2c
<i>Ateles geoffroyi</i>	NOM, CITES, UICN	Vulnerable
<i>Agouti paca</i>	NOM, CITES	Endangered
<i>Mazama americana</i>	CITES	
<i>Odocoileus virginianus</i>	CITES	
<i>Nasua narica</i>	CITES	
<i>Microtus quasiater</i>	NOM	Rara
<i>Neotoma albigula</i>	NOM	Threatened
<i>Coendu mexicana</i>		Threatened
Birds		
<i>Dendrocygna autumnalis</i>	CITES	
<i>Bubulcus ibis</i>	CITES	
<i>Circus cyaneus</i>	NOM, CITES	Threatened
<i>Falco peregrinus</i>	CITES	
<i>Ortalis vetula</i>	CITES	
<i>Penelope purpurascens</i>	CITES	In danger of extinction
<i>Crax rubra</i>	CITES	Endangered
<i>Colinus virginianus</i>	CITES	Endangered
<i>Dendrortyx barbatus</i>	UICN, NOM.	Almost threatened ; endemic
<i>Coccyzus americanus</i>	CITES	
<i>C. erythrophthalmus</i>	CITES	
<i>C. minor</i>	CITES	
<i>Crotophaga sulcirostris</i>	CITES	
<i>Geococcyx californianus</i>	CITES	
<i>G. velox</i>	CITES	
<i>Piaya cayana</i>	CITES	
<i>Rhynchopsitta terrisi</i>	UICN,	Vulnerable
<i>Aulacorhynchus prasinus</i>		Endangered
<i>Amazona viridigenalis</i>	UICN,	Endangered
<i>Ara militaris</i>	NOM, CITES, UICN	Vulnerable A1c, C2a
<i>Aulacorhynchus prasinus</i>	NOM	In danger of extinction
<i>Ramphastos sulfuratus</i>	NOM	Threatened
<i>Athene cunicularia</i>	NOM, CITES	Threatened
<i>Aegolius acadicus</i>	CITES	
<i>Ciccaba virgata</i>	NOM, CITES	Threatened
<i>Glaucidium brasilianum</i>	NOM, CITES	Threatened
<i>G. gnoma</i>	NOM, CITES	Rare
<i>G. minustissimum</i>	NOM, CITES	Rare
<i>Micrathene whitneyi</i>	NOM, CITES	Endangered

<i>Otus flammeolus</i>	CITES	
<i>O. guatemalae</i>	NOM, CITES	Rare
<i>O. trichopsis</i>	CITES	
<i>O. asio</i>	NOM, CITES	Threatened
<i>Tyto alba</i>	CITES	
Reptiles		
<i>Crotalus durissus</i>	NOM, CITES	In danger of extinction
<i>Boa constrictor</i>	NOM, CITES	In danger of extinction
<i>Crocodylus acutus</i>	NOM, CITES, UICN	Vulnerable/A1ac
Others		
<i>Autochton siernadrior</i>		Endemic to the Region
<i>Eucheira socialis</i>		In danger of extinction
Plants		
<i>Cupressus lusitanica</i>	UICN, NOM, CITES	In danger of extinction
<i>Abies guatemalensis</i>	NOM	Endangered
<i>Ceratozamia hildae</i>	NOM, CITES	
<i>Ceratozamia mexicana</i>	CITES	
<i>Dioon edule</i>	NOM, CITES	
<i>Zamia fischeri</i>	CITES	
<i>Bursera galeottiana</i>		Endemic to Mexico
<i>B. zimapanana</i>		Endemic to Mexico
<i>B. lancifolia</i>		Endemic to Mexico
<i>B. morelensis</i>		Endemic to Mexico
<i>Acanthocereus baxaniensis</i>	CITES	
<i>Astrophytum ornatum</i>	CITES	
<i>Cephalocereus cometes</i>	CITES	
<i>Coryphantha clava</i>	CITES	
<i>C. compacta</i>	CITES	
<i>C. jalpanensis</i>	CITES	Endemic to the Reserve
<i>Echinocactus grandis</i>	CITES	
<i>E. grusonii</i>	CITES	
<i>Echinocereus pentalophus</i>	CITES	
<i>Lophophora diffusa</i>	CITES	Endemic to Mexico
<i>Mammillaria bucareliensis</i>	CITES	Endemic to the Reserve
<i>M. elongata</i>	CITES	
<i>M. hahniana</i>	CITES	
<i>M. parkinsonii</i>	CITES	
<i>M. prolifera</i>	CITES	
<i>Myrtillocactus geometrizans</i>	CITES	
<i>Neobauxbamia polylopha</i>	CITES	Endemic to the Reserve
<i>Stenocereus marginatus</i>	CITES	

<i>Neolloydia conoidea</i>	CITES	
<i>Nopalea karwinskyana</i>	CITES	
<i>Opuntia microdasys</i>	CITES	
<i>Opuntia puberula</i>	CITES	
<i>Pachycereus marginatus</i>	CITES	
<i>Rhipsalis baccifera</i>	CITES	
<i>Stenocereus queretaroensis</i>	NOM, CITES	Endemic to Mexico
<i>Thelocactus sp.</i>	CITES	
<i>Fouquieria fasciculata</i>	NOM	
<i>Phaseolus coccineus</i>		wild relative of common bean
<i>Phaseolus formosus</i>		wild relative of common bean
<i>Phaseolus leptostachyus</i>		wild relative of common bean
<i>Phaseolus pedicellatus</i>		wild relative of common bean
<i>Magnolia dealbata</i>	CITES	
<i>M. schiedeana</i>		medicinal plant
<i>Passiflora serratifolia</i>		medicinal plant
<i>Passiflora sicyoides</i>		medicinal plant
<i>Phytolacca purpurascens</i>		food plant
<i>Piper hispidum</i>		food plant
<i>Solanum aligerum</i>		wild relative of potato
<i>Solanum americanum</i>		wild relative of potato
<i>S. appendiculatum</i>		wild relative of potato
<i>S. cervantesii</i>		wild relative of potato
<i>S. chrysotrichium</i>		wild relative of potato
<i>Valeriana scandens</i>		medicinal plant
<i>Verbena elegans</i>		medicinal plant
<i>Verbena ehrenbergia</i>		medicinal plant
<i>Yucca queretaroensis</i>	NOM ; CITES	Endemic to Mexico and rare
<i>Tillandsia roland-gosselinii</i>	NOM	Threatened
<i>Encyclia mariae</i>	NOM	Threatened
<i>Laelia anceps</i>	NOM	Endangered
<i>Brahea moorei</i>	NOM	Rare
<i>Chamaedorea sartorii</i>	NOM	Threatened

Annex M: Informative Note on GESG

The Grupo Ecológico Sierra Gorda, I.A.P. (GESG) began working in 1987. Declared a civil non-profit association in 1989, in May 1996 the status was converted to a private assistance institution, to provide greater institutional solidity and financial transparency. GESG has a staff of 50 full-time and 60 part-time employees

Its mission is the integral rescue of the Sierra Gorda Biosphere Reserve, requiring the creation of job opportunities for the people of the region while maintaining the protection and regeneration of local natural resources. Operating within the Sierra Gorda Queretana in east central Mexico, GESG has been named manager of the newly formed Sierra Gorda Biosphere Reserve. The ultimate goal is to be able to guide social and economic development within the rules of the Reserve's official Management Program.

As manager of the 383,000 hectare Biosphere Reserve, GESG implements reforestation, environmental education, preservation of species, sanitation and community improvement programs. With the Biosphere Reserve designation, programs in alternative uses of the forest, sustainable forest management, agro-forestry, sustainable agriculture, composting, ecotourism and climate change will be added

GESG is supported by the Sierra Gorda Ecological Patronage, which is responsible for locating sponsors to finance GESG's work. GESG has received or is receiving funding from agencies such as the U.S. Fish & Wildlife Service; The British Council, Mexico's National Fund for Social Enterprise, the W.K. Kellogg Foundation, the Monterrey Technical and Higher Education Institute (Tech de Monterrey), and the Canada Fund. Funds are also provided by a number of government agencies in Mexico including Queretaro State Government, the Social Development Ministry, the Mexican Fund for Nature Conservation and others. Annual operating budgets have been in excess of US\$ 1 million since 1996.

GESG owes its continued success and profound knowledge of the region to experience gained over the past 12 years. Its work is based on a fundamental capacity to coordinate the participation of the local people, the involvement of the appropriate government offices, and full-time fundraising efforts. GESG provides organizational infrastructure for the management of the Sierra Gorda Biosphere Reserve, and works in close partnership with the Reserve Director. Institutional coordination of the actions that take place within the Reserve includes the orientation of the management program towards practical and realistic activities directing the region towards comprehensive conservation and the transition to sustainable development.

GESG's Goals Achieved Over The Last 12 Years

- Successful establishment of social networks which have been knitted together through the commitment, hands-on work, and administrative support organized by the Grupo Ecológico Sierra Gorda I.A.P.
- GESG has planted 3-million native trees on 2,000 privately owned plantations, installed more than 1,000 fuel-efficient stoves, constructed 500 dry-composting latrines and put in place more than 1,500 signs with environmental messages. GESG works in 120 communities.
- Both national and international recognition as best practice for the design and implementation of social participation strategies.
- Through the perseverance of the Community Development Program, tools such as the dry latrine, which were unknown to state-run programs even two years ago, are now priorities for the State Water Commission and municipal governments. This means that sewerage is no longer considered appropriate for waste disposal, a significant change in not only local culture but institutional norms as well.
- Through a communications campaign which includes television interviews (twice a month) with representatives of the Sierra Gorda, radio spots and interviews, television promotional programming and newspaper and magazine articles on a regular basis both locally and throughout the state, the sustainable development and eco-consciousness promoted by the Grupo transcends the limits of the Biosphere Reserve.

- Due to the grassroots mobilization of the Grupo Ecológico Sierra Gorda I.A.P., the activities have been included within the Regional Development Program of the Social Development Ministry.
- Replicable strategies for social organization have been designed that are applicable to rural areas in similar conditions.
- More than 20 NGOs from throughout the Republic have solicited and received training from the Grupo Ecológico Sierra Gorda I.A.P. In addition, State Governments (Queretaro, San Luis Potosi and Nuevo Leon) have requested the guidance of the GESP to design and implement NGO outreach strategies.
- Local communities have been empowered to request public investment that integrate sustainable ends.
- As the result of a process organized and carried out by the NGO, former President Ernesto Zedillo decreed the Sierra Gorda a Biosphere Reserve in 1997.
- In 1998, 20 regional assemblies were carried out in which a representative portion of the Sierra Gorda Biosphere Reserve population was interviewed, and 95% declared their personal approval of and commitment to conservation of the region.
- The Sierra Gorda Biosphere Reserve is the only reserve in Mexico to be declared through active citizen participation.
- GESG has received several awards including the 1996 Premio Garza Sada from Tech de Monterrey, honorable mention in the 1994 Ecological Merit Prize from the Ministry of the Environment, and recipient of the 1999 Ecological Merit Prize.

Grupo Ecológico Sierra Gorda I.A.P. is directed by an executive board, which consists of a president, a vice president, secretary and treasurer, all elected by publicly certified acts of the organization's general assembly. The executive board meets periodically with program coordinators and supervisors to formulate work programs and operational policies. Annual operating budgets are calendar year, and general accounting practices are used. Two external agencies are used to carry out annual financial and operational audits: López y López, a firm located in Queretaro, and the Inter-American Foundation.

GESG works in 159 communities as promoter, implementing agency, planner, coordinator and representative before Government agencies. This successful experience will be replicated in communities in neighbouring municipalities that will eventually be annexed to the legal limits of the Reserve, adding up to 100,000 additional hectares.

Annex N: Equipment Register

OUTPUT 1: RESERVE MANAGEMENT INFRASTRUCTURE IS STRENGTHENED			
ITEM	UNIT	UNIT COST	TOTAL COST
		US \$	US \$
COMPUTER SET (DESK TOP)	4	1,500	6,000
COMPUTER (NOTEBOOK)	1	2,000	2,000
COMPUTER (MACINTOSH)	1	2,500	2,500
LASER JET PRINTER	2	500	1,000
VEHICLE (PICK UP DOBLE CABINA)	2	14,370	28,740
OUTPUT 2: POLICY, ECOLOGICAL AND SOCIO-ECONOMIC BASELINE ASSESSMENTS ARE UNDERTAKEN			
ITEM	UNIT	UNIT COST	TOTAL COST
		US \$	US \$
COMPUTER (NOTEBOOK)	1	2,000	2,000
VEHICLE (PICK UP DOBLE CABINA)	1	14,370	14,370
OUTPUT 4: FINANCIAL SUSTAINABILITY OF THE RESERVE MANAGEMENT IS ASSURED.			
ITEM	UNIT	UNIT COST	TOTAL COST
		US \$	US \$
COMPUTER SET (DESK TOP)	2	1,500	3,000
COMPUTER SET (NOTEBOOK)	2	2,000	4,000
LASER JET PRINTER	2	500	1,000
VEHICLE (JEEP CHEROKEE 4X4)	1	24,600	24,600
OUTPUT 5: BIODIVERSITY-FRIENDLY AND SUSTAINABLE ALTERNATIVE LIVELIHOOD OPTIONS ARE DEVELOPED AND DEMONSTRATED			
ITEM	UNIT	UNIT COST	TOTAL COST
		US \$	US \$
VEHICLE (DOBLE CABINA)	1	14,370	14,370

Annex O: Infrastructure Specifications

1. The project includes the construction of a regional training center formed by the following units:

Offices with a total surface of 367 M² for: The Project Director, Coordinators, Administrative staff and technicians.

Library and video library: 52 M²

Multiple use room: Lessons, projections, conferences, puppets etc. – 112M²

Round, open thatched roof area for: Lessons, choir, movie, theater, puppets, etc. 150 M²

Visitors and training courses attendants hostel: 150 M

Assorted materials storage barn for barbed wire for reforestation, garbage bins, chicken wire for vegetable gardens, tools for fire fighting campaigns, etc. 200 M²

Sanitation services for hostel: 40 M² for offices: 30 M²

Parking space: 600 M²

Nursery and vegetable garden: 400 M²

Wild fauna rehabilitation area: 90 M²

Sewage treatment plant: 500 M²

For the covered areas materials from the region will be used as they are the most suitable for the local climate, like stone and adobe for the walls, thatched roofs and wood, metal doors and windows, cement floors and rustic finish, trying to achieve the greatest simplicity and comfort.

2. Field bases

There will be 4 small field bases along the Sierra Madre Oriental:

Research and surveillance base in the Rio Tancuilin canyon, Landa de Matamoros

Research and surveillance base in Joya del Cedro, adjacent to the core zone Joya del Hielo, Landa de Matamoros.

Research and surveillance base in Llano Chiquito, adjacent to the core zone Cañada de las Avispas, Landa.

Research and surveillance base in Tanchanaquito, on the south slope of the Santa Maria River, Jalpan.

Each base will be formed by the following modules:

Dining kitchen: 20 M²

Two bedrooms – lounge: 30 M²

Sanitation services: 9 M²

Guard's post: 9 M²

Local materials will be used for the construction like wood and thatch besides cement and roofing tin.

3. Tracks and paths for surveillance and monitoring.

There will be tracks for vehicles, bridle ways and footpaths to cover the whole of the Reserve to keep constant monitoring through 50 community surveillance guards.

4. Sign posting.