THE WORLD BANK/IFC/M.I.G.A.

OFFICE MEMORANDUM

DATE: March 25, 1999

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

FROM: Lars Vidaeus, GEF Executive Coordinator

EXTENSION: 3-4188

SUBJECT: **Peru – GEF Medium-Sized Project (MSP)**
Collaborative Management for the Conservation and Sustainable Development of the Northwest Biosphere Reserve (RBNO) Project

1. Please find attached the Project Brief for the "Peru - Collaborative Management for the Conservation and Sustainable Development of the Northwest Biosphere Reserve (RBNO) Project" submitted to the World Bank by Pro Naturaleza. The project has been endorsed by the GEF national operational focal point (see letter, also attached).

2. In accordance with operational guidance for approval of Medium-Sized Projects, we are submitting this project brief to the GEF Secretariat for action by the Chief Executive Officer (CEO). We are simultaneously circulating copies to UNDP/GEF, UNEP/GEF, STAP, and the CBD Secretariat for comments within 15 working days, or by April 15, 1999.

3. We look forward to receiving the GEF Secretariat's comments on this Medium Size Project by April 29, 1999 (if not before). Thank you and best regards.

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R. Asenjo, UNDP (Fax:212-906-6998)
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cc: Werbrouck, Monge (LCCPE); Iwase (LCC6C); Redwood, Lovejoy, Sprissler, Abedin (LCSES); Kimes, Castro, Bossard (ENVGC).

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PROJECT SUMMARY

PROJECT IDENTIFIERS	
1. Project name: Collaborative Management for the Conservation and Sustainable Development of the Northwest Biosphere Reserve.	2. GEF Implementing Agency: The World Bank
3. Country or countries in which the project is being implemented: Peru	4. Country eligibility: Peru ratified the Convention on Biological Diversity on 7 June 1993.
5. GEF focal area(s): Biodiversity	6. Operational program/ Short-term measure: Arid and Semi-arid ecosystems (OP1) and forest ecosystems (OP3)

7. Project linkage to national priorities, action plans, and programs:

The National Conservation Strategy (ENC, 1992) establishes as one of its objectives the minimization of negative environmental impacts and the restoration of environmentally critical areas. The Tumbes region, where the project area, the Northwest Biosphere Reserve, is located, is classified by the ENC as one of Peru's environmentally critical areas.

The proposal is consistent with the Environmental Action Plan of the National Council of the Environment (CONAM), which proposes the establishment of an appropriate framework for the participatory management of protected areas. It is also consistent with the Plan's strategic objective: Sustainable Use of Natural Resources in the Piura-Tumbes Region. This is one of the areas selected by CONAM to initiate its Regional and Local Sustainable Development Program, which aims to build the planning and management capacity of social institutions.

The project will provide exceptionally valuable support for the National Biodiversity Conservation Strategy, which is being drawn up by the National Biodiversity Commission, and for the implementation of the National Plan to Combat Desertification, which recognizes the Tumbes – Piura region as one of the highest priority areas. In addition, the National Plan for National Protected Areas Systems identifies the project area as one of the Priority Zones for the Conservation of Biological Diversity in Peru.

The project will also provide complementary support to reconstruction efforts in the wake of disasters caused by the El Niño phenomenon.

8. **GEF national operational focal point and date of country endorsement: Consejo Nacional del Ambiente** (CONAM), October 16th 1997.

PROJECT OBJECTIVES AND ACTIVITIES

9. Project rationale and objectives:	Indicators:
The long-term conservation of the Northwest Biosphere Reserve requires the participation of the local population and other stakeholders in the management of the Reserve. At present a number of plans exist which have been drawn up with the stakeholder participation, but what is required is to progress to the next stage, that of collaborative management, which will ensure a more equitable distribution of the benefits of conservation among the rural population. Goal: To contribute to the conservation and sustainable development of the valuable biological diversity of the Northwest Biosphere Reserve, with the participation of local stakeholders. Objective: Achieve the degree of collaborative management necessary to guarantee the sustainable use of renewable natural resources and the conservation of biological diversity in the Northwest Biosphere Reserve.	(a) Number of sectors with an interest in the Reserve (resource users, extractors, businesses, local authorities, government agencies, NGOs and others) participating in co-management mechanisms orientated towards the conservation and sustainable development of the Northwest Biosphere Reserve. (b) Economic or capital resources invested in the co-management of the Northwest Biosphere Reserve by the various stakeholder groups involved. (c) Factors, which have a negative effect on the conservation and sustainable use of natural resources, display regressive tendencies.

10. Project outcomes:	Indicators:
(a) The local population adopts land use plans for the Northwest Biosphere Reserve. Local authorities, government agencies and other stakeholders implement these plans through the formulation and application of management plans for different productive activities.	Orders issued by provincial governments (5), and local offices of the Ministries of Agriculture and Tourism, conform to agreed plans for land use and productive activities, in accordance with zoning proposals for the Northwest Biosphere Reserve.
(b) Local organizations are stronger and have increased capacity to participate actively in the collaborative management of the Northwest Biosphere Reserve.	Effective functioning of the Biosphere Reserve Management Committee, the 5 provincial committees and other participatory instruments.
(c) Resource users have improved knowledge of techniques that permit the sustainable use of natural resources in the buffer zone and sustainable development of the cooperation zone (transition zone).	Percentage of resource users in the buffer zone of the Reserve (30%) replicating positive experiences of the management and conservation of natural resources
(d) The project has validated improved production systems developed in pilot projects, and producer groups are adopting these systems for application in key areas and critical activity areas.	Number of hectares (600) of demonstration activities managed communally under sustainable multi-product systems (forestry and livestock) in critical zones, in collaboration with other agencies.
(e) Stakeholders have a better understanding of the supply of environmental services, environmental problems and alternative options.	The general public recognizes and appreciates the publicity material distributed about the Biosphere Reserve, its conservation, and the supply of environmental services. Number of local and regional radio and television stations with programs that publicize the concepts of biosphere reserves and sustainable development, and the number of influential people (teachers, community leaders, local government leaders, etc.) trained to incorporate environmental concerns in their daily work.
11. Project activities to achieve outcomes (including costs in US$ or local currency of each activity).	Indicators
a.1. Follow up meetings and support actions to achieve official approval of the Northwest Biosphere Reserve strategy and its incorporation into plans drawn up by government agencies and local authorities. Estimated cost: US $83,610.00; base line $15.970,00, GEF $67.640,00.	Number of plans and maps approved by the 5 provincial governments. Number of local protected areas established in the buffer zone of the reserve (2).
a. 2. Participatory planning processes for the management of productive activities, in accordance with the zoning proposals for the Northwest Biosphere Reserve. Estimated cost US $113,630.00; base line $24.120,00, GEF $89.510,00.	Number of areas defined or proposed, in accordance with zoning proposals for the Biosphere Reserve, with their management plans.
b.1. Actions to strengthen and consolidate the Management Committee and its constituent representative bodies. Estimated cost US $91,770.00; base line $13.970,00, GEF $77.800,00.	Guidelines and regulations issued, and agreements entered into by the Management Committee being applied effectively and with relevance at a national and transnational level.
b.2. Local capacity building: formation of user groups and actions to strengthen the capacity of user groups and local authorities. Estimated cost US $236.040,00; base line $157.440,00, GEF $78.600,00	Number of local governments trained (5) and local organizations (8) formed and trained.
c.1 Design and implementation of outreach programs orientated towards the sustainable use of natural resources, the diversification of agriculture, pasture management, management of forests and wild fauna, the transformation of products, small business administration and the marketing of agricultural produce. Estimated cost US $711.280,00; base line $592.520,00, GEF $118.760,00.	Number of agricultural plots (20), hectares of grassland managed (500), hectares under forest management (300), percentage of wild fauna extractors organized (60%), number of fauna management plans approved (4), and numbers of resource users trained in administration and marketing (100) in the buffer zone.

d.1. Development of models for the community management of forest resources, the improvement of pastoral systems, the installation of agroforestry systems, the restoration of degraded lands, and marketing "ecological" products. Estimated cost US $615.160,00; base line $497.630,00, GEF $117.530,00.	Number of user groups (4) trained in agroforestry systems, in collaboration with other development agencies; hectares of grassland managed within the Tumbes Reserve Zone (500); number of agencies / markets / intermediaries for the sale of "ecological" products identified (4); existence of a plan for the restoration of degraded areas drawn up by local councils, with the support of educational centers and local NGOs.
d.2. Participatory analysis, feedback and systematization of the project's experiences. Estimated cost US $108.790,00; base line $19.120,00, GEF $89.670,00.	Number and type of experiences dissemination among local resource users. (4).
e.1. Formulation and implementation of a Social Communications Strategy oriented towards the conservation of the Northwest Biosphere Reserve. Estimated cost US $114.920,00; base line $25.580,00, GEF $89.340,00.	Number and type of communication materials produced and distributed in the region of the Northwest Biosphere Reserve (radio spots, newspaper articles, posters, bulletins). Number of events undertaken and materials produced for influential people in the Biosphere Reserve (bulletin, technical leaflets, talks, field visits)

12. Estimated budget (in US$):

The GEF will finance the incremental costs necessary to promote the conservation of the unique biodiversity of the Biosphere Reserve, which will involve incorporating an environmental, conservationist dimension in the development initiatives being undertaken in the region.

MSP:

GEF:	US$ 728,850
Co-financing:	US$ 1,346,350
MSP TOTAL:	US$ 2,075,200
GEF Total:	**US$ 750,000** (MSP + PDF A)

INFORMATION ON INSTITUTION SUBMITTING PROJECT BRIEF

13. **Pro Naturaleza – the Peruvian Foundation for the** Conservation of Nature, is a private, non-profit organization incorporated in 1984 as a foundation, in keeping with Peruvian legislation. Its purpose is to help achieve conservation, protecting the sustainable use of natural resources, -- soil, water, flora and fauna – throughout Peru and promoting a better quality of life for current and future generations.

The Strategic Plan for the 1997-2000 period states that the purpose of Pro Naturaleza is to "promote and implement the necessary tasks to ensure the conservation of nature in the country through the maintenance of the biological diversity, the sustained use of species and ecosystems and the development of a conservation culture among the Peruvian society". Specific objectives include the following:

1. Conservation of biodiversity, through the work in protected areas and the protection of endangered species.
2. Sustainable utilization of renewable natural resources through the promotion of sustainable development strategies; planning, and carrying out demonstration projects that contribute to sustainable development; and research related to the sustainable use of specific natural resources.
3. Development of a conservation culture, through awareness raising programs and the promotion of conservation and sustainable development policies.

At the present time 20 projects are being conducted with a general budget exceeding two and a half million U.S. Dollars. These projects are being implemented within the framework of the institutional guidelines established by the Strategic Plan, mainly through integrated conservation and development projects in and around the most important protected areas of the country, such as Manu NP, Pacaya Samiria NR, Abiseo NP, Yanachaga Chemillen NP, Bahuaja Sonene NP, Cerros de Amotape NP, among others.

Accordingly, Pro Naturaleza is currently an institution specializing in the protection and sustained management of renewable natural resources, with considerable experience in designing conservation policies, conducting planning processes and implementing studies and projects at national, regional and local levels. Topical areas with the greatest activity include protected natural areas and the sustained management of resources in the buffer zones of such areas, mainly forestry resources, as well as creating a conservation awareness at different levels and promoting policies on various topics that are favorable to conservation, placing emphasis on protected areas and forestry matters.

14. Information on proposed executing agency (if different from above): As above

15. Date of initial submission of project concept: July 23 1997

INFORMATION TO BE COMPLETED BY IMPLEMENTATION AGENCY

16. Project identification number: PE-GM-57041

17. Implementing Agency contact person:

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18.Project linkage to Implementing Agency program(s): The GEF - World Bank provides support for the establishment of a Trust Fund for Peruvian Protected Areas (FONANPE), which is administered by an institution created by the Peruvian government, called PROFONANPE.

Funds canalized through PROFONANPE partially cover the operational costs of the Tumbes Reserved Zone and the Cerros de Amotape National Park. They help ensure that field operations are carried out adequately, with an effective presence of staff responsible for the administration of these areas. The PROFONANPE funding coming from the above-mentioned GEF –WB project covers only direct operational costs of the protected areas (staff and operations). This is not enough to ensure the long-term sustainability of the Biosphere Reserve.

The proposed project will complement the support provided by PROFONANPE in the best possible way, since it will permit the active participation of the local population and other stakeholders in the administration of the Biosphere Reserve and the protected areas it contains. This will contribute towards sustainable development in the region and ensure the conservation of the protected areas. The project will provide start-up support for the Management Committees, which according to Peruvian environmental law should be established in protected areas.

Map 2 shows how the proposed project geographically complements activities funded by GEF / PROFONANPE in protected areas. The project also complements existing GEF / PROFONANPE projects thematically, since it will work directly with different stakeholders, including local authorities and resource users, with the aim of raising support for the protected areas, involving local people in collaborative management initiatives, promoting the sustainable use of natural resources outside strictly protected areas, and strengthening the role of the buffer zones within the framework of the biosphere reserve management model.

PROJECT DESCRIPTION

PROJECT RATIONALE AND OBJECTIVES

Peru is considered to be one of the megadiversity countries, characterized by contrasting landscapes which range from extremely arid deserts to very humid tropical forests, and a dramatic physiology, due to the presence of the Andean mountain range which transverses the country from North to South, attaining a maximum altitude of 6768 meters above sea level. This complicated geography means that Peru is one of the countries with the least area of agricultural land per inhabitant, and this is one of the reasons for the preponderance of inappropriate land management practices, whose environmental consequences include deforestation, soil erosion, and the loss of biological diversity.

The Peruvian coast is a narrow strip of mainly flat desert lands between the coast and the Andean mountain range, with an average width of approximately 40 Km. In the extreme North of the country, however, the coastal zone includes important areas of dry and sub-humid forests and xerophytic vegetation, which historically have been subject to processes of severe degradation caused by unsustainable resource use practices, especially timber extraction and stock rearing. A number of management measures have been taken, including the establishment of protected areas, the recognition of the Northwest Biosphere Reserve, the promotion of alternative, sustainable land use practices, and attempts to involve stakeholders in decision making processes regarding the use of natural resources. However threats to biodiversity and the deterioration of the natural resource base continue to affect the region, which is characterized by a particularly rich biological diversity, high rates of endemism, and the presence of some of the most threatened forest formations in the world.

The project seeks to achieve the collaborative management of the Northwest Biosphere Reserve, by building capacity among stakeholders to enable a real involvement of local decision makers at different levels in the management process, with aim of reversing negative tendencies (especially the processes of desertification) and conserving existing biological diversity. It is envisaged that co-management will a permit a more equitable distribution of the benefits generated by the sustainable use of the natural resources of the Biosphere Reserve among the local population, and especially the rural population, which lives in conditions of acute poverty, in a predominately arid environment which is subject to a continuous process of gradual degradation.

The project corresponds to the Biodiversity activity area of the GEF, and is directed towards achieving the objectives of the Convention on Biological Diversity. It is compatible with the operational programs Forest Ecosystems (OP3), since the area contains particularly important forested areas, and Arid and Semi-arid Ecosystems (OP1).

CURRENT SITUATION

The project area lies within the eco-region denominated Tumbes/Piura Dry Forests, Ecuador – Peru. This region is recognized as being of great biological importance, because of the large number of endemic species it contains in a relatively small area. It is estimated that of the 6300 vascular plants found in the eco-region, approximately 1200 are endemic, and many of these are only known from specific, very small areas of forest. The vertebrates are equally diverse, and some groups, such as birds, display high rates of endemism. More than 800 species of birds have been recorded in western Ecuador, and of these 40 species and 140 subspecies are known only from the dry forests of south-west Ecuador and north-west Peru.

According Birdlife International, the avifauna of Peru is among the richest in the world, with a total of 1678 species. Peru is the country in South America with the second largest number of threatened birds (31 species), and of the 89 key areas for bird conservation identified in Peru, the project area (Tumbes) is the one which contains the largest number of threatened species (12). The Northwest Biosphere Reserve is located within the Tumbesian (West Ecuador and Peru) center of endemism, which is recognized as being of outstanding importance at a global level.

For these reasons, the eco-region where the Northwest Biosphere Reserve is located has been classified by WWF and the World Bank as being Outstanding at a Global Level because of its biological distinctiveness. In terms of its conservation status, the eco-region is classified as Endangered, and in terms of conservation priority, as Maximum Regional Priority.

A study sponsored by Conservation International refers to the forests of western Ecuador and northwest Peru as being among the most endangered ecosystems in the world, since more than 90% of original forest cover below 900 m has been converted to other land uses as a result of human activity. It is estimated that only 6% of the three major forest types in the region maintain their original vegetation cover. The project area, and specifically the legally protected areas, contains the most extensive and best conserved forest formations in the eco-region.

The Northwest Biosphere Reserve (Map 1) covers part of the coastal deserts and the adjacent Amotape mountain range, with a maximum altitude of 1700 meters above sea level. It is located in the Department of Tumbes and northern parts of the Department of Piura between 3° 24' and 4° 53 S. The climate is characterized in general terms as being transitional between the desert climate of the Peruvian coast and the tropical sub-humid climate of southern Ecuador, with annual rainfall ranging between 15 mm in the South to 1000 mm in the extreme Northwest. However the zone is periodically affected by the El Niño phenomenon, which is associated with cycles of exceptionally heavy rainfall (up to 3500 mm in a few months) alternating with years of extreme drought. Although this phenomenon causes significant damage to road systems, productive infrastructure, and human settlements, and has a negative impact on human activities in general, the high levels of rainfall during El Niño years produce important benefits in terms of the natural regeneration of continental ecosystems.

During the first half of the century, the economy of the region was based on the extraction of forest products, which were still abundant at the time, principally timber and charcoal. In response to the growing scarcity of these resources, to the extent that forestry activities were no longer sustainable, the first measures to protect them were taken in 1957, and these culminated in the declaration of an indefinite general ban on the extraction of forest products in 1974. However these measures have had little impact. In parallel with this process, the importance of livestock rearing as an economic activity increased, characterized by extensive free range systems and inadequate management practices. Overgrazing and burning of pasture lands have favored the spread of introduced grass species, which has contributed to the loss of natural vegetation cover and accelerated desertification, with natural forests reduced to relicts with a limited capacity for natural regeneration. An indicator of this process is the rapid spread of the invasive shrub "borrachera" (Ipomoea carnea), which is poisonous to cattle an inhibits the regeneration of forest species.

Natural factors, such as the cycle of droughts alternating with periods of extremely heavy rainfall, have aggravated these processes of degradation, through the action of rains falling on exposed soils. These effects are compounded by mistaken government policies in post-Niño periods, which promote the introduction of large herds of cattle into the region to take advantage of seasonal grassland, which prevents natural forest regeneration and increases grazing pressures in subsequent dry years. At present, low-lying areas of the Biosphere Reserve have been practically denuded of their natural vegetation cover, leading to the loss of both economic and ecological value, and increasing pressure on upland areas where forest cover is still maintained, located in the core zone and other protected areas within the Biosphere Reserve.

An Appraisal of the Current Situation of the Northwest Biosphere Reserve was carried out during the initial phase of formulating the Conservation Strategy. The appraisal process involved the organization of visioning workshops, which identified Strengths, Weaknesses, Threats and Opportunities. On the basis of this information, the illegal activities with the greatest impact can be identified as follows: Extensive agriculture and over grazing; timber extraction; uncontrolled fuelwood extraction; conversion of forest lands to agricultural use; unregulated hunting of threatened species; and fishing with toxic products in water courses and ponds. A matrix showing the short-term, medium, and long-term threats to the Biosphere Reserve is attached as Appendix 1.

Within this context, although some progress has been made towards the definition of conservation policies and implementation of sustainable development initiatives, with the participation of local people and other resource users, to date this has been insufficient to reverse the trends which are threatening the singularly important biological diversity of the Northwest Biosphere Reserve, and the associated processes of land degradation, desertification and impoverishment of the local population.

The Northwest Biosphere Reserve

As mentioned above, attempts to manage resource use in the area date back to 1958, the year when the Tumbes National Forest was created, with an area of 75,102 ha. In 1974 the ban on forestry activities was declared, and in 1975 the Cerros de Amotape National Park was created, covering an area of 91,300 ha., in an attempt to protect remaining forested areas in response to their accelerated destruction. In the same year El Angolo Game Reserve, which borders the National Park, was established, covering an area of 65,000 ha. Subsequently in 1988, the

Tumbes Mangroves National Sanctuary was declared, which covers 2,972 ha. at the extreme north of the Peruvian coast on the border with Ecuador.

The creation of the Northwest Biosphere Reserve was first proposed by the Peruvian government and subsequently recognized by UNESCO in 1977. The reserve incorporated the three protected areas existing at the time: The Tumbes National Forest, Cerros de Amotape National Park, and El Angolo Game Reserve. However it was not until 1988 that the first effective action was taken to manage the Cerros de Amotape National Park, as a result of collaboration between the National Park's Directorate of the Ministry of Agriculture and Pro Naturaleza. These activities were subsequently extended to include the Tumbes National Forest and El Angolo Game Reserve, with emphasis on increasing the participation of local people, local authorities and government agencies.

Management Initiatives

In 1988 the Operational Plan for the Cerros de Amotape National Park was produced, as the result one of the first participatory planning initiatives in Peru, and this marked the start of effective administration of the area. In 1992, an Operational Plan for El Angolo Game Reserve was produced, and in 1994 a Sustainable Development Plan for the Biosphere Reserve and adjacent areas covering the period 1994-98. This document included the proposal to expand the core zone of the Biosphere Reserve to include the Tumbes Mangroves National Sanctuary and the sectors El Caucho and Campo Verde within the Tumbes National Forest. According to this proposal, the buffer zone of the reserve is defined to include the remainder of the Tumbes National Forest and the Game Reserve, and the transition zone covers surrounding areas to the South and North-west of the protected areas. These participatory planning initiatives were complemented by other projects and actions, including resource protection, awareness raising and sustainable resource use.

On the basis of these experiences, Pro Naturaleza submitted a proposal to the Strengthen the Management of Protected Areas Project (FANPE), a collaborative project between German Cooperation Agency (GTZ) and INRENA (the National Institute of Natural Resources, which has managed Peru's protected areas since 1992) to undertake a larger scale, long-term planning process covering the entire Northwest Biosphere Reserve, with the emphasis as before on the participation of local people and institutions. This process was duly completed, and the principal results included the formulation of a Conservation and Development Strategy for the years 1997-2007, the re-classification of the Tumbes National Forest as a Reserved Zone, and a proposal to extend the Cerros de Amotape National Park. Another important result was the process itself, which led to the formation of the Biosphere Reserve Management Committee (Appendix 1) and the initiation of activities oriented towards institutionalizing and consolidating the participation of local stakeholders. Documents produced include the Biosphere Reserve Strategy, an appraisal of the reserve, and the proposed Master Plans for the different protected areas.

GEF support for preparation of this MSP has been important in allowing the completion of processes initiated with the Management Committee, the provision of follow up support, and the adoption of suggestions made during the course of the process. Block A funds have supported:

1. the development of coordination mechanisms between members of the Management Committee, principally at a directorial level, with the aim of creating social and political conditions which facilitate the implementation of the strategy.

2. the formulation of technical proposals to implement the strategy. This is one of the incremental costs of implementing this process of change, since the organizations involved have not included it in their plans or budgets.

Current support for conservation initiatives in the Northwest Biosphere Reserve

PROFONANPE provides funding to INRENA to cover the basic staff and operational costs in the Cerros de Amotape National Park and the Tumbes Reserved Zone.

The project "Conservation and Sustainable Use of the Mangroves Ecosystem", funded by the Dutch government, and implemented by Pro Naturaleza, is now in its final year. This project provides support for the Tumbes Mangroves National Sanctuary, as well as promoting the sustainable management of the mangroves ecosystem as a whole. The geographical reach of this project is limited to the small mangroves ecosystem, and the transition zone to the surrounding dry tropical forests. The total project area is only about 5000 ha., only a small part of the total area of the Northwest Biosphere Reserve.

The Algorrobo Project ("Sustainable Use of the Dry Forests of Northern Peru") is a large project funded by the Dutch government. It covers three departments in north-west Peru, having recently expanded its coverage to include the Department of Tumbes for the first time. This project provides technical assistance and small loans to rural people for activities which include mesquite (algarrobo) forest management; bee keeping, and goat husbandry using semi-enclosed systems. Since the project is still starting up in Tumbes, no detailed information based on experience is yet available about its geographical coverage, beneficiaries, investments, etc. Pro Naturaleza will coordinate activities with this project to ensure that there is no duplication of activities in this regard.

Pro Naturaleza, with the support of the H.E.L.P. Foundation, is implementing a project based on the promotion of conservation and sustainable resource use activities in three rural schools in the Biosphere Reserve. The productive activities installed by the project are used by staff as teaching aids to enrich the learning process. The project is consistent with the objectives of the Biosphere Reserve.

FONCODES, a government fund for poverty alleviation, is funding a project in the settlement of Matapalo (in the cooperation zone of the Biosphere Reserve), oriented towards the sustainable use of natural resources, the establishment of integrated farm plots and building the capacity of local organizations.

A matrix presenting baseline support is attached as Appendix 2

EXPECTED PROJECT OUTCOMES

The project will have a positive and sustained effect on the conservation of a zone of exceptional importance for the conservation of biological diversity, in an eco-region which has been classified as of Maximum Regional Priority. The project will enable the reversal of tendencies which are negatively affecting the ecosystem, and lay the foundations for the sustainable use of natural resources and supply of environmental services, which will have a positive impact on the development of the region, and generate material benefits for the rural population. This will be achieved through the consolidation of land use planning, capacity building among the local population, and the development of tools for effective local participation. It is hoped that this experience will have an indirect impact across the border in Ecuador, where similar processes of degradation are affecting forest resources. To achieve these objectives, following results are expected to be attained by the end of the project:

(a) The local population will have adopted land use plans for the Northwest Biosphere Reserve. Local authorities, government agencies and other stakeholders will be implementing these plans through the formulation and application of management plans for different productive activities.

(b) Local organizations will be stronger and have increased capacity to participate actively in the collaborative management of the Northwest Biosphere Reserve.

(c) Resource users will have improved knowledge of techniques which permit the sustainable use of natural resources in the buffer zone and sustainable development of the cooperation zone (transition zone).

(d) The project will have validated improved production systems developed in pilot projects, and producer groups will be adopting these systems for application in key areas and critical activity areas.

(e) Stakeholders will have a better understanding of the supply of environmental services, environmental problems and alternative options.

ACTIVITIES AND FINANCIAL INPUTS

The results of the project will be attained by carrying out the following activities:

a.1 Follow up meetings and support actions to achieve official approval of the Northwest Biosphere Reserve strategy and its incorporation into plans drawn up by government agencies and local authorities. Estimated cost: US $83,610.00. This activity aims to consolidate the agreements reached on previous occasions, using participatory processes to ratify the approval of the reserve's Conservation and Sustainable Development Strategy, and provide support to local decision makers for its incorporation in legal and planning initiatives. This will involve the provision of legal advice, training in land use planning techniques, the production of maps, the formulation of proposals for local protected areas, and other complementary activities. The base line costs of this activity are estimated at US $15,970, and the GEF incremental cost at US $67,640.

Baseline activities consist of on-going efforts to create the social, political and technical conditions to enable decision makers in the Biosphere Reserve to take sustained action to implement the strategy in the mangroves ecosystem. This area is located in the extreme north-east of the Biosphere Reserve on the border with Ecuador. A strategy has been drawn up with the participation of local people and a committee has been set up with representatives of user groups and other stakeholders. The Mangroves Project (supported by the Netherlands Government) is planned to continue for one more year, to allow time to complete the process of obtaining approval and begin implementation of the area strategy. The contribution of the Mangroves Project is however insufficient to address the needs of the entire Biosphere Reserve, as it is extremely limited in its geographical scope. Only limited funding is available for training local professionals in environmental management and integrated land use planning.

The *proposed MSP* will build on this initiative, firstly by promoting acceptance and adoption of the strategy for the mangroves ecosystem by local authorities in the Department of Tumbes; and secondly by expanding the strategic planning process to cover the entire Biosphere Reserve.

a.2 Participatory planning processes for the management of productive activities, in accordance with the zoning plans for the Northwest Biosphere Reserve. Estimated cost US $113,630.00. This process will help advance the implementation of the strategy at a local level, by orientating production on the basis of zoning and management plans. It will require close involvement of the stakeholders involved in each area. The base line costs, corresponding to compatible investments in the region, are estimated at US $24,120, and the GEF incremental cost at US $89,510.

Baseline: As in the above case, the Mangroves Project is promoting the development of zoning proposals as a way of imposing order on the extraction of marine resources from the mangroves. This includes the internal zoning of the Tumbes Mangroves National Sanctuary, in accordance with Protected Area Law (Law 26834). The project is promoting the establishment of Communal Reserves, to strengthen the buffer zone of the Sanctuary, with where possible controlled access to marine resources, and the adoption of sustainable extraction systems.

GEF alternative: The MSP will promote the approach adopted by the Mangroves project in other areas of the Biosphere Reserve. The GEF alternative will be oriented toward the formulation, with the participation of resource users, of management plans for principal resources, in accordance with the recommendations of the strategy document and making use of the experience gained in the mangroves area. This mangrove experience will be completed and systematized. This will include plans to manage livestock farming in protected areas where this activity is permitted, plans for the management of forestry resources in rural areas based on the adoption of woodland pasture systems, and land use plans for non-irrigated agricultural systems.

b.1 Actions to strengthen and consolidate the Management Committee and its constituent representative bodies. Estimated cost US $91,770.00. These actions represent the next stage in a process that began with the election of the Committee, with the aim of consolidating the involvement of local stakeholders and converting the Committee into the official management body of the Biosphere Reserve, with responsibility for the regulation of activities required to achieve strategic aims. The base line costs are estimated at US $13,970.00 and the GEF incremental cost at US $77,800.

Baseline: As in the above cases, the Mangroves Project is making an effort to consolidate the management capacity of Local Support Committee of the Sanctuary, which has close ties with the Zarumilla Provincial Committee of the Biosphere Reserve Management Committee. The project is also promoting the participation by this group of stakeholders in the Reserve Management Committee.

The *GEF alternative* proposes to replicate this work in the Cerros de Amotape National Park, the Tumbes Reserved Zone and El Angolo Game Reserve. It will provide support for strengthening the organizations of resource users. It will promote the recognition of the Provincial Committees by the competent authorities (local governments, public sectors, etc.) and of the Reserve Management Committee by regional governments, ministries, INRENA and CONAM.

b.2 Local capacity building: formation of user groups and actions to strengthen the capacity of user groups and local authorities. Estimated cost US $236,040. This is a key activity to ensure that user groups and local decision makers are adequately represented on the Management Committee, and to increase its operational capacity in accordance with the previsions of the Strategy. The base line costs, corresponding to compatible investments in the region, are estimated at US $157,440, and the GEF incremental cost at US $78,600.

In this case, the *Baseline scenario* is provided by the activities of the Algarrobo Project, also financed by the Netherlands Government, but carried out by INRENA. This project provides important capacity building support

and training for its beneficiaries, who are principally users of Algarrobo forest resources in Casitas - Quebrada Bocapan, Mancora - Quebrada Fernandez, and Quebrada Pajaritos. The Mangroves Project also contributes in this respect by supporting the organization of different groups of resource users, and ensuring the compatibility of their activities with ecosystem planning objectives. The existence of these forms of organization will help build the capacity of local stakeholders to participate in the management of the Biosphere Reserve .

The *GEF alternative* will support the replication of baseline activities in other areas of the Biosphere Reserve and with other key groups of resource users, through a variety of capacity building and training activities.

c.1 Design and implementation of outreach programs orientated towards the sustainable use of natural resources, the diversification of agriculture, pasture management, management of forests and wild fauna, the transformation of products, small business administration and the marketing of agricultural produce. Estimated cost US $711,280. This activity aims to provide resource users in the buffer and cooperation zones of the reserve with additional technical knowledge which will help them to improve the sustainability of existing and new productive activities. These actions complement the planning of productive activities in accordance with the zoning proposals for the Northwest Biosphere Reserve. Local inputs to base line costs are considerable, and are estimated to amount to US $592,520, and the GEF incremental cost is estimated at US $118,760.

Baseline: In this component, the Mangroves Project and the Algorrobo Project both make an important contribution to the baseline situation, as well as the School, Production and Ecology project (financed by the H.E.L.P. Foundation) and FONCODES (Social Development Compensation Fund), which is a Peruvian government program. Pro Naturaleza also intends to continue supporting training activities, and the processing and marketing of Algarrobo flour (including the development of an export market). The mission of the agencies involved in baseline scenario activities is to improve the knowledge and productive capacity of focal groups of beneficiaries (users of mangrove resources, local residents in Fernandez and Pajaritos, three pilot schools, and residents of the Matapalo district, respectively.)

The *GEF alternative* will target the resident population in the buffer zone of the Reserve in general, apart from those cases where other projects are already financing the same activity. In line with the strategy, the GEF alternative will cover measures to order the technical improvement of activities and processes, and the development of proposals for alternative profitable productive activities, according to the land use capacity of the different areas of the Reserve, including the management of mesquite and other forests, ecotourism, production of mesquite flour, and grassland and livestock management

d.1 Development of demonstration models for the community management of forest resources, the improvement of pastoral systems, the installation of agroforestry systems, the restoration of degraded lands, and marketing "ecological" produce. Estimated cost US $615,160. This activity complements the previous one by installing pilot plots to develop models for the sustainable use of natural resources by local people, and promote the replication of these models by other resource users. The base line costs of the activity are estimated at US $497,630 and the GEF incremental cost at US $117,530.

Baseline: This activity complements the outreach program, and the same organizations contribute to the baseline situation, but it is oriented towards the establishment of demonstration productive modules, integrated where possible, such as small livestock husbandry, bee keeping, agriculture, and forestry production, as well as alternative activities such as rural tourism.

The *GEF alternative* will target additional beneficiaries and complement pilot modules aimed at demonstrating the efficiency of a sustainable approach in the various resource use systems proposed. It will cover important activities which have so far been inadequately developed, such as forest management, grassland management, marketing, etc. In other cases, the project will complement existing initiatives by replicating successful experiences in areas not covered by existing projects.

d.2 Participatory analysis, monitoring and evaluation and systematization of the project's experiences. Estimated cost US $108,790.00. This will be a new activity in the project zone, which will promote learning processes and improve the efficiency of the project by permitting the adoption of appropriate measures compatible with the overall goal of sustainability. The base line costs are estimated at US $19,120.00 and the GEF incremental cost at US $89,670.

Baseline investment is provided by the Mangroves Project in the form of workshops and activities undertaken with the participation of various groups of resource users with the aim of analyzing and comparing the

systems which are being proposed by the project; and designing and establishing a system to monitor and evaluate the project. In addition, the Participatory Rural Appraisal and Planning Workshops organized by Pro Naturaleza in some areas of the Biosphere Reserve, such as Quebrada La Angostura and Jahuay Negro, also contribute to the baseline. A start has been made in the design of a Monitoring and Evaluation system for the Biosphere Reserve, building on the advances made by the Mangroves Project.

The *GEF alternative* aims to consolidate and extend participatory planning processes at all levels, as well as consolidating the Monitoring and Evaluation system. Stakeholders in the Biosphere Reserve will be trained in participatory analysis, and monitoring and evaluation will undertaken jointly with them. A systematic review of past experience will also be carried out to disseminate lessons from experience. Pro Naturaleza will use the methodology known as Participatory Reflective Analytical Mapping: Assessing Sustainability (MARPS in Spanish) (See details in page 20, under Monitoring and Evaluation).

e.1 Formulation and implementation of a Social Communications Strategy orientated towards the conservation of the Northwest Biosphere Reserve. Estimated cost US $114,920. Like the previous activity, this will be a new experience in the zone. It will build on previous initiatives which were undertaken under the heading of the Creation of Conservation Awareness, with the aim of improving knowledge of conservation issues, and promoting changes in the behavior of local stakeholders in line with the objectives of the Northwest Biosphere Reserve. Base line costs are estimated at US $25,580.00 and the GEF incremental cost at US $89,340.

For this activity, *Baseline* support is provided by the communications components of the Mangroves Project and the H.E.L.P. project, although these both operate in limited geographic areas.

The *GEF alternative* will design a communications strategy for the Biosphere Reserve as a whole, building on the lessons and experiences derived from the Mangroves and the H.E.L.P. projects. Appropriate forms of intervention at different levels and for each specific target group (sectorial and local authorities, local resources users, communicators, teachers, etc.), will be defined, and this will enable the strategy to be applied through the development of products for use in a wide range of different situations. Communications is a key factor to promote collaborative management.

SUSTAINABILITY ANALYSIS AND RISK ASSESSMENT

LONG TERM SUSTAINABILITY

Greater public awareness of environmental issues, greater attention paid to environmental issues by local authorities, and increased public knowledge of the importance accorded to the Northwest Biosphere Reserve on account of the distinctiveness of its biological diversity, will create a favorable scenario for the success of the project and the generation of a conservationist culture in the zone. The results and activities proposed by the project are directly related to the aim of ensuring the long-term sustainability of development in the region, based on an appropriate management of the natural resources by stakeholders of the reserve.

The project proposals to establish mechanisms which will ensure that decisions taken regarding land and resource use are based on technical criteria formally approved and appropriated by stakeholders in the zone. To achieve this, measures will be taken to improve local organizational and technical capacity to participate in the development of alternative productive practices which lead to improved patterns of resource use. The increasing demand for "ecological" products, and nature tourism, open up new possibilities for productive activities which are compatible with the conservation of the Northwest Biosphere Reserve.

Measures to improve the operational capacity of the Management Committee and other local organizations will have an effect in the short and medium term, while educational work will help to ensure the sustainability of conservation initiatives in the longer term.

The availability of financial resources for management of legally protected areas within the Biosphere Reserve is guaranteed by the existence of PROFONANPE, and this also helps to ensure the long-term sustainability of the conservation of the Biosphere Reserve.

RISK FACTORS

The principal risks are associated with the possible adoption of policy measures or development proposals which promote inappropriate practices, such as extensive stock rearing, without taking account of local conditions and trends, nor the guidelines laid down in the Strategy for the reserve, thus detracting from the credibility of this document. It is hoped to mitigate this risk through the adoption of plans for land use and productive activities which will influence decision making processes at a national and regional level.

Another risk is that it proves impossible to control and reduce illegal extractive activities, if the proposals for alternative productive activities are not assimilated by the local population. Lack of secure access to resources or the probability that greater initial investments will be required for activities based on sustainable resource use could put these activities at a comparative disadvantage compared with illegal resource extraction. To mitigate this risk, the project includes incentives for the initial development of alternative productive activities, which should facilitate their adoption by the local population.

The possibility that local authorities and government agencies provide insufficient support for the participatory management initiatives promoted by the project is also a risk factor, since this would generate difficulties for the adoption of the proposed strategy, and for the work of the Management Committee and other participatory structures. However, on the basis of previous experience it is expected that local government institutions will provide a high degree of support for the project.

The conversion of areas currently used for extensive livestock rearing to intensive agricultural use, could generate increased pressure to expand livestock rearing activities in other zones, particularly in zones located within the protected areas, which contain important areas suitable for pastoral use. The Puyango - Tumbes bi-national irrigation scheme creates significant new areas of intensive agriculture.

With the aim of ordering the development of livestock rearing activities, a number of initiatives are under way which could make important contributions in this respect, and these will be significantly boosted by the project. The institutional scenario within which the project will operate is as follows. The principal livestock farmers organization is the Association of Livestock Farmers of the Tumbes Reserved Zone, which was set up in 1994 on the initiative of INRENA and Pro Naturaleza. In 1997 and 1998, the Association participated in the formulation of the Biosphere Reserve strategy. Recently a Technical Commission has been set up, made up of the three institutions mentioned above, with the aim of drawing up a plan for the use of grasslands of the Tumbes Reserved Zone. At a departmental level, government agencies have invited livestock farmers' organizations and guilds to participate in drawing up a management plan for natural grassland of the Tumbes Region. It is important to mention that livestock farmers organizations are represented on the Biosphere Reserve Management Committee.

Finally, mention should be made of the legal measures which have been enacted to protect the forests of the region, in response to the grave deterioration they have suffered since the turn of the century. At present there is a moratorium on timber extraction in the region. However no efficient surveillance and control systems have been established to ensure compliance. The proposed project will contribute indirectly to improving control systems, by raising conservation awareness among local authorities and community leaders (as a result of its communications strategy). This kind of social participation also helps put pressure on the people in charge on implementing control systems to comply with their responsibilities.

A matrix showing short-term, medium, and long-term threats, and actions proposed to address these threats, is attached as Appendix 3 (Spanish).

STAKEHOLDER INVOLVEMENT AND SOCIAL ASSESSMENT

It is important to emphasize that the project proposal is consistent with the strategic guidelines proposed for the Biosphere Reserve's Conservation and Sustainable Development Strategy. This strategy was drawn up as the result of a broad-based process of participation and consultation with local stakeholders, building on experiences of joint work with local people in the implementation of a range of activities and projects over the previous ten years. The project proposes the development of a series of mechanisms which will ensure that local stakeholders have the capacity to implement the reserve's conservation and sustainable development Strategy.

The formulation of the project is the result of a continuation of the participatory processes which led to the definition of the Strategy. Pro Naturaleza staff held a series of meeting and conducted interviews with representatives of local authorities, government agencies, and producers organizations, whose views and suggestions have been incorporated into the design of the proposal. In addition, project staff have participated actively in meetings held to plan reconstruction activities in the aftermath of the El Niño phenomenon. A large number of such meetings have been held, and these have given project staff the opportunity to assimilate new ideas and concerns of the stakeholders, as well as to disseminate the ideas incorporated in the design of the project.

In the implementation of the project proposal, Pro Naturaleza will have recourse to the knowledge and experience acquired during more than 10 years of work in the zone, which has included:

i) the collaborative management of protected areas;

ii) the promotion of participatory planning processes orientated towards the management of both protected areas and specific activities such as tourism and education;

iii) resource management projects, working both with native and introduced species, including the management of mesquite forests and the commercial production of mesquite products, stock rearing, beekeeping, extraction of fuelwood and other forest resources, seasonal agriculture, etc.;

iv) participatory rural appraisals, gender studies, socio-economic assessments, resource evaluations, technical tools as low cost geographic information system (Map maker), among others.

FINANCING PLAN AND INCREMENTAL COST ASSESSMENT

There are a number of donor bodies with a presence in the Northwest Biosphere Reserve, including government organizations and international technical cooperation agencies, which provide support for social development work with the local population. This work is undertaken principally by public bodies, as part of the Peruvian government's social support program. Many of these activities, although not specifically directed towards the same goals as the project (conservation of the ecosystem), share a similar approach which is to promote sustainable development. In this sense, the intervention proposed by the project is complementary to the actions of these agencies. The aim is to ensure that they are oriented towards the global objectives supported by GEF.

The support provided by the project consists in orienting existing productive capacity of government bodies towards the defined objectives of the Northwest Biosphere Reserve. Since these are far from being incompatible with the objectives of other projects, the project will have the effect of increasing the benefits generated by these projects, and extending the reach of development programs to social groups not at present benefiting from them.

Baseline: The baseline scenario for the project "Collaborative Management for the Sustainable Development of the North-west Biosphere Reserve, Peru" is defined by the set of activities and initiatives to be carried out in the area by different private and public organizations, among them Pro Naturaleza itself, through its Mangroves Project and the project "School, Production and Ecology"; INRENA, especially through its Algarrobo Project; and FONCODES. The total resources available to the project are US $1,346,350, which are distributed as follows.

a) Follow up work and approval of the Biosphere Reserve Strategy: US $15,970.
b) Participatory planning: US $24,120
c) Consolidation of the Management Committee: US $13,970
d) Local capacity building US $157,440
e) Design and implementation of training programs in the sustainable use of resources: US $592,520
f) Demonstration models of production systems and land restoration techniques: US $497,630
g) Monitoring, evaluation and reviews of previous experiences: US $19,120
h) Design and implementation of the Communications Strategy: US $25,580.

These resources do not include the budget assigned by PROFONANPE from the Trust Fund for Protected Areas for the management of the Cerros de Amotape National Park and the Tumbes Reserved Zone.

The baseline scenario will permit progress to be made towards the participatory management of some sectors of the Northwest Biosphere Reserve, in line with the recommendation of the Strategy document. Activities

will include natural resource and land use planning, monitoring and evaluation, conservation education, and the development of proposals to improve production systems and restore ecosystems. However, the Baseline program will only be implemented in small areas of the entire Biosphere Reserve. Also, the funds available are not sufficient to ensure that a sufficiently representative proportion of stakeholders are organized and empowered to participate actively in the management of the Biosphere Reserve.

The *GEF alternative* is conceived as a long-term social process aimed at achieving the participatory management of the North-west Biosphere Reserve, with a total intervention area of approximately 234,400 ha. The first phase will last three years and will require total financing amounting to US $2,075,200, distributed as follows:

a) Follow up work and approval of the Biosphere Reserve Strategy: US $83,610.
b) Participatory planning: US $113,630
c) Consolidation of the Management Committee: US $91,770
d) Local capacity building US $236,040
e) Design and implementation of training programs in the sustainable use of resources: US $711,280
f) Demonstration models of production systems and land restoration techniques: US $615,160
g) Monitoring, evaluation and reviews of previous experiences: US $108,790
h) Design and implementation of the Communications Strategy: US $114,920.

Compared to the baseline situation, the GEF alternative will allow important progress to be made in terms of completing the spatial ordering of the Biosphere Reserve, both at a macro level, and at a detailed level in specific zones, on the basis of the shared vision defined with the local population (agreed zoning proposals and the Strategy document). To complement and reinforce these planning processes, the GEF alternative will consolidate the organizational structures (at different spatial, social and economic levels within the Biosphere Reserve) required to implement participatory management systems. The capacity of stakeholders will be increased and they will be better informed.

In terms of activities, emphasis will be placed on continuing work and providing follow up support for the Biosphere Reserve Strategy and related land and natural resource use planning initiatives, with the full participation of local stakeholders; monitoring and evaluation; the systematic review of experiences to date; and communications. The communications component will be fully integrated into all aspects of the proposed MSP project on an ongoing basis. The set of actions proposed will lay the basis for the sustainable development, and ensure the conservation of biodiversity and natural resources in the region.

Baseline financing provided by Pro Naturaleza, INRENA's Algarrobo Project and FONCODES amounts to US $1,346,350. The cost of the GEF alternative is estimated at $2,075,200. The incremental cost of the MSP project is US $728,850, for which GEF financing is requested. The Financing Plan and Incremental Cost Analysis is summarized in Table 1 below. A matrix showing a more detailed presentation of activities and domestic and global benefits is attached as Appendix 4.

Table 1: Financing Plan and Incremental Cost Analysis

	Baseline Scenario US$000			Proposed Alternative US$000	Increment US$000
	Pro Naturaleza	Other Donors	TOTAL	TOTAL	Increment Requested of GEF
A.1 Follow up and support actions to achieve official approval of the Reserve strategy.	**5.15**	**10.82**	**15.97**	**83.61**	**67.64**
A.2 Participatory planning processes for the management of productive activities	**5.30**	**18.82**	**24.12**	**113.63**	**89.51**
B.1 Actions to strengthen the Management Committee	**5.15**	**8.82**	**13.97**	**91.77**	**77.80**
B.2 Local capacity building	**5.55**	**151.89**	**157.44**	**236.04**	**78.60**

	PRO NATURALEZA	OTHER DONORS	TOTAL	TOTAL	INCREMENT REQUESTED OF GEF
C.1 Design and implementation of outreach programs.	**5.85**	**586.67**	**592.52**	**711.28**	**118.76**
D.1 Development of models for the sustainable use of natural resources by local communities.	**5.85**	**491.78**	**497.63**	**615.16**	**117.53**
D.2 Analysis and systematization of experiences, M&E	**5.30**	**13.82**	**19.12**	**108.79**	**89.67**
E.1 Social Communication Strategy	**5.44**	**20.14**	**25.58**	**114.92**	**89.34**
TOTAL	**43.59**	**1,302.76**	**1,346.35**	**2,075.20**	**728.85**

IMPLEMENTATION BUDGET

A summary of project expenditures by disbursement category is summarized below in Table 2. Detailed cost tables by disbursement category and by activities are presented in Appendices 5 and 6, respectively.

Table 2: Estimated Breakdown of Costs by Budgetary Component (US$,000)

Components	GEF	Pro Naturaleza	Others Donors	Total
Personnel	352.37	16.20	186.03	554.60
Subcontracts	31.50		75.00	106.50
Training & publication	87.95		485.15	573.10
Equipment maintenance & service	88.15	12.40	50.61	151.16
Travel	19.80		14.56	34.35
Evaluation Mission and M&E	14.00		12.50	26.50
Project Administration	112.50	13.68	439.83	606.41
Contingencies	22.58	1.31	39.08	22.58
TOTAL	728.85	43.59	1,302.76	2,075.20

Total GEF support for this MSP amounts to US$750,000, which comprises a Block A preparation grant (US$21,150) and a proposed MSP grant for the incremental costs of project implementation (US$728,850).

PROJECT IMPLEMENTATION PLAN

Pro Naturaleza will execute the project, using a widely participatory strategy. Implementation of project activities will incorporate all stakeholders. Operatively, the project will be incorporated within Pro Naturaleza's Northwest Program, with offices in the cities of Piura, and Tumbes.

Pro Naturaleza will establish a proficient technical team in charge of the project. In order to secure an appropriate incorporation of the institutional experience and know-how, as well as the other initiatives conducted by Pro Naturaleza in the Biosphere Reserve, the Director of Pro Naturaleza's Northwest Program will dedicate 60% of his time to this project.

The implementation head of the project will be the Comite de Gestion de la RBNO (Management Committee of the Biosphere Reserve). This committee will be actively involved in the oversight of the project, in the formulation of the logical framework, the preparation of annual plans and the design of the monitoring and evaluation plan. Provincial Committees have been set up as decentralized bodies within the management Committee. Appendix 7 provides information on the participation of the different stakeholders in these committees.

Pro Naturaleza will be responsible for conducting and giving technical support to the planning processes at local and regional levels, the training and organization of stakeholders, the implementation of education activities, conduction of the communication program, the implementation of alternative and demonstrative production activities based on the management of the resources and the design and implementation of the monitoring and evaluation plan. INRENA will be responsible for the management of the protected areas and the establishment of the management committees, which will integrate the Management Committee of the Biosphere Reserve. The Manglares project will conduct the conservation and development activities in that part of the Biosphere Reserve. Its experience will enrich the management of the Biosphere Reserve. The Algarrobo project will conduct activities related with forest management, production and commercialization. The H.E.L.P. project will conduct activities at schools, which includes pedagogical, ecological and production aspects. FONCODES will support production projects in the rural northern part of the Biosphere Reserve.

During the first year of the project, the effort will be concentrated on the participatory planning processes at the different levels, the coordination with and strengthening of the Management Committee and its members, training of stakeholders, design of specific programs (such as the communication program and the monitoring and evaluation program), and start-up of alternative, biodiversity-friendly production activities.

DURATION OF PROJECT (IN MONTHS): 36	PROJECT-MONTHS
ACTIVITIES	0 6 12 18 24 30 36
Follow up and support actions to achieve official approval of the Reserve strategy.	----------]
Participatory planning processes for the management of productive activities	----------]
Strengthening and consolidation of the Management Committee	----------]
Strengthening local government and resource users' organizations.	----------]
Outreach programs orientated towards the sustainable use of natural resources.	----------]
Community forest management models.	----------]
Analysis, M&E and systematization of experiences.	----------]
Social Communications Strategy.	----------]

PLAN FOR STAKEHOLDER PARTICIPATION

STAKEHOLDER IDENTIFICATION

These are the various groups that are represented in one way or another on the Management Committee, including regional and local authorities, local councils, government agencies, farmers organizations, stock farmers, extractors of forest products, fishermen, universities, professional guilds, media groups, businesses, and local and regional NGOs. All these groups participated in the formulation of the Strategy for the Biosphere Reserve.

As indicated in the previous paragraph, the Management Committee is the higher dimension of the project because of its indispensable role in strategy formulation. This is the body, which oversees the implementation of activities and ensures that they accord with the framework defined by the Biosphere Reserve Strategy.

The various agents referred to in the MSP proposal are a priori the direct beneficiaries of the activities which will be undertaken, as well as being the local counterparts in their implementation (for example by assuming responsibility for drawing up planning proposals and obtaining the legal approval required).

The project will emphasize work with local groups of resource users, who can be classified according to the type of productive activity they engage in. However it is important to point out that the patterns of productive activity in rural areas of the Reserve are very diverse. At the same time the project will act at a spatial level (geographical and political), principally with political and local government authorities.

The producer groups and organizations of resource users which will be closely involved in the work of the project are:

- **Livestock farmers: The project will collaborate with the Committees of small and medium livestock farmers** that exist in a number of areas of the Biosphere Reserve , as well as with the Livestock Promotion Committee that represents the larger livestock farmers.

- Extractors of forest products: Most of the population of the Biosphere Reserve lives in dry forest zones, and is involved to a greater or lesser extent in the extraction of fuelwood, and timber for parquet flooring and the manufacture of wooden crates. In this case, the organization of these groups is practically non-existent.
- Agriculturists: In this case the activities of the project refer only those farmers who practice seasonal agriculture without irrigation, in dry forest areas and other areas where the availability of water is extremely limited. The organization of these farmers is also practically non-existent.
- Rural Communities: This form of organization is extremely widespread in rural areas of Peru. However in the North-west Biosphere Reserve there is only one legally constituted Rural Community, with a membership of approximately 140 families, dedicated mainly to livestock farming, the harvest of Algarrobo beans and fuelwood extraction.
- Migrants: These refer to settlements established in some parts of the Reserve by families from the Andean section of the Department of Piura. There are two settlement close to the Tumbes Reserved Zone.
- In coastal areas a number of different groups of resource users can be identified, although all of them with a very limited degree of organization. They include: Shrimp larvae fishermen, a group of approximately 3000 people who operate along the entire coastline of the Department of Tumbes; shellfish extractors, principally based in the mangroves zone; artisanal fishermen, who also operate all along the coast; and shrimp farmers, who manage a total of about 100 businesses within the 4000 ha. of the mangroves ecosystem.
- Another important group of local organizations are the local governments these have responsibility, at a local level, for land use planning and regulation, environmental protection, and the promotion and organization of socio-economic development. Within the north-west biosphere reserve there are 5 provincial councils and, within these 5 provinces, 12 district councils.
- Mention should also be made of the local political representatives of central government: the prefects (provincial level), sub-prefects (district level) and governors and lieutenant governors (towns and settlements). In total there are about 100 of these officials within the north-west biosphere reserve.

DISSEMINATION OF INFORMATION AND CONSULTATION EXERCISES

The dynamic of the project itself requires a permanent process of information exchange and consultations with the stakeholders involved, since this is indispensable for the implementation of the Strategy and to achieve the participatory management of the Northwest Biosphere Reserve. The dissemination of information and consultation will be undertaken on a permanent basis from the start of the project, especially in relation to the formulation of rules and regulations, and the adjustment of existing legal mechanisms being applied by the competent authorities. In addition there is a need to write up and disseminate previous experiences of Pro Naturaleza which have not yet been published, to contribute to increasing local knowledge of the area and the potential and limitations management tools currently being applied. This will form part of the project's social communications program.

STAKEHOLDER PARTICIPATION

The project intends to work with regional and local authorities to implement the approved zoning proposals for the reserve and plans for productive activities, on the basis of consensus agreement with resource users. This group will be provided with training in sustainable production techniques and support to strengthen their organizations. With one group in particular it is hoped to develop pilot plots and/or rationalize the use they currently make of resources within the Tumbes Reserved Zone. With the Management Committee itself, it is hoped to strengthen its management capacity, principally by obtaining recognition for its role as the official reserve management body. With other stakeholders it is hoped to implement a social communications program, oriented towards increasing local appreciation of the value of the Biosphere Reserve for the supply of environmental services.

SOCIAL ASPECTS OF PARTICIPATION

The way the project will be implemented, which in large measure is linked to the implementation of the Reserve strategy, means that it is unlikely that the project's activities will directly lead to conflicts. On the contrary, it is hoped to be able to take steps to resolve existing conflicts between user groups in the buffer zone, as well as some conflicts which exist in the core zone of the reserve, through planning initiatives which conciliate the interests of the resource users with those of the Biosphere Reserve and its constituent protected areas. On the other hand, the participatory planning processes, especially at the community and users groups levels, secure the incorporation of a vision of gender, especially the involvement of women in the production process. The project will promote a regulated access to the natural resources for the benefit of local people. Considering that social organization of rural people is usually weak, the project will strengthen this aspect.

MONITORING AND EVALUATION

System Monitoring and Evaluation. Pro Naturaleza is in process of monitoring and evaluating the conservation status of the reserve, based on methodologies developed by the IUCN known as PRAM[1]. This system is now beginning to be applied by Pro Naturaleza's Northwest Program, with the support of a team of qualified professionals.

The objectives for the monitoring and evaluation system include:

- Establish baseline information that allows for the follow up of indicators for the Strategy specific objectives
- Provide adequate orientation and support for activities, projects, and projects implemented in the NBR.
- Measure the impacts of natural resources caused by natural and human factors
- Measure the progress of conservation and sustainable development activities in the NBR, in agreement with strategic objectives set up through 2007.

It is hoped that the monitoring and evaluation system will generate information to be fed back into the Management Committee's decision-making process. M&E should provide the building blocks to demonstrate positive and negative changes in the state of the natural resources in the Reserve due to the Strategy actions, and provide elements to orient future actions. The method seeks to invoke reflective and analytical discussions among stakeholders, thereby enriching the strategic process. It should be possible to measure advances toward sustainability using the systematically generated information. Providing follow-up to the monitoring and evaluation system and ensuring that it is a useful and practical tool is an important task of the Management Committee. As the oversight mechanism responsible for the M&E plan, the committee is directly responsible for the quality and use of the information generated by the M&E system.

Project Monitoring and Evaluation. Based on the Pro Naturaleza experience with Monitoring and Evaluation of different projects, a method of project self- assessment will be applied, rooted in the Logical Frame Analysis (LFA or logframe), with inputs of IUCN approach. The Logical Frame is used as a management tool for the project, and is the base to define the monitoring plan as well as the annual plans of the project.

Project Annual Workplan. The Project Logframe is used to prepare the Project Annual Workplan, which takes the Objectives and Results as stated in the Logframe. This Workplan develops the Activities in detail, using the same kind of information requested in the Logframe (different resources required, responsibilities and a timetable, but in monthly or weekly periods). This Annual Workplan will detail the M&E activities included in the Project Logframe. Often, in the time gap between the preparation on Project Logframe and the beginning of the Project, the situation in the Project region changes forcing the revision of Project Logframe. This task should be accomplished before addressing the development of the Annual Workplan.

Monitoring Plan. To monitoring the proper fulfillment of project indicators identified on the Logframe. The Project Team will define the appropriate method for data collection, organization and processing.

Project self – evaluation. Periodically on an annual or half – yearly basis, the Project Team and members of counterparts organizations, will carry out a Project self-evaluation exercise, which should address the main aspects of Project assessment: effectiveness, efficiency, relevance and impact, using information and data collected by the Project about the context in the region. The products of the exercise will be summarized in a document, which includes lessons learned and recommendations for the next Annual Workplan and, eventually, amendments to the Project Logframe.

Project reporting. The document produced in the Project self-evaluation exercise will provide input to the Project Reports to the WB. Eventual amendments to the Project Logframe will be discussed and agreed with the WB before adopting them officially. Annual Reports will be sent annually, showing the evolution of project indicators and the results of the self-evaluation process.

External evaluation. An external evaluation will be undertaken at the end of the project to assess project achievements and capture lessons for dissemination.

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[1] Participatory Reflective Analytical Mapping: Assessing Sustainability. IUCN, Geneva, Switzerland. Imbach, Alejandro et al. 1997.

PROJECT CHECKLIST

PROJECT ACTIVITY CATEGORIES			
Biodiversity	Climatic Change	International Waters	Ozone Depletion
Zoning proposals / management of protected areas: X	Efficient prod. & distrib:	Water body:	Monitoring:
Buffer zone development: X	Efficient consumption:	Integrated land and water:	Country program:
Inventories / monitoring: X	Solar:	Contaminant:	ODS phaseout:
Ecotourism: X	Biomass:	Other:	Production:
Agro-biodiversity: X	Wind:		Other:
Trust fund(s):	Hydro:		
Benefit-sharing:	Geothermal:		
Other:	Fuel cells:		
	Other:		
TECHNICAL CATEGORIES			
Institution building: X			
Investments:			
Policy advice: X			
Targeted research:			
Technical/ management advice: X			
Technology transfer: X			
Awareness/ information/ training: X			
Other:			

APPENDICES

APPENDIX 1: THREATS MATRIX

IMMEDIATE THREATS	INTERMEDIATE THREATS	FINAL THREATS
Reduction of populations of endemic and threatened species	Legal and illegal extraction of endemic and threatened species in excess of their carrying capacity.	Rural unemployment and underemployment / low rural incomes
Transformation of habitats	Impacts of systems of production (stock rearing and shifting agriculture).	Resource users inadequately trained
Loss of forest cover	Extraction in excess of carrying capacity Forest clearance and fires for agriculture	Unemployment / underemployment. Lack of income generating opportunities
Contamination of water bodies and soils	Use of toxic substances for fishing Use of agro chemicals Inadequate sanitary facilities	Resource users inadequately trained Local government with insufficient expertise in sanitation.
Changes of land use	Earthworks in protected areas for irrigation projects	Irrigation projects
Increased human settlement and immigration into protected areas	Lack of employment opportunities and low incomes of the rural population.	Population growth
Human settlements and productive activities incompatible with the conservation objectives of the Northwest Biosphere Reserve	Land use management incompatible with the conservation and development objectives of the Northwest Biosphere Reserve.	Inadequate application by institutions of zoning proposals for the Northwest Biosphere Reserve
Declining profitability of productive activities	Fragmentation of land tenancy units. Increase in monoculture	Lack of training in efficient use of soil and water in productive systems.
Declining prices of products and resources	Shift towards monoculture Low quality products	Lack of training in marketing natural resources.
Limited regeneration of wild species	Limited availability of water	Increased climatic variability
Increased risk of disease among wild fauna	Uncontrolled movement of livestock (contraband)	Lack of control by authorities
Increased indices of environmental offenses	Limited presence of environmental surveillance authorities	Inadequate application of environmental laws
High risk of disasters affecting housing and productive infrastructure as a result of the El Niño phenomenon.	Continued high vulnerability index to the effects of the El Niño phenomenon.	El Niño not taken account of in development planning.

APPENDIX 2:

BASELINE MATRIX

INSTITUCION	ACTIVIDADES	PRESUPUESTO ANUAL	PATRIMONIO	TOTAL
Public sector				
Algarrobo (Mesquite) Project	Protection and management of forest regeneration	100,000.00	25,000.00	125,000.00
Ministry of Transport and Communications	Piura and Tumbes Strategic Development Plan	32,000.00	0.00	32,000.00
INRENA	Administration of Protected Areas	280,000.00	60,000.00	340,000.00
Grau Regional Authority	Support for land use planning of the mangrove forest zone	0.00	3,000.00	3,000.00
Ministry of Agriculture	Land titling of rural properties (Tumbes)	120,000.00	30,000.00	150,000.00
NGOs				
Pro Naturaleza	Northwest Biosphere Reserve Conservation and Sustainable Development Strategy	34,000.00	10,000.00	44,000.00
	Plans for Public Use and Tourism in the Mangrove Forests	8,000.00	2,000.00	10,000.00
	Land use planning in the mangrove forests	4,000.00	0.00	4,000.00
	Support for Protected Areas	230,000.00	70,000.00	300,000.00
	Production modules	50,000.00	10,000.00	60,000.00
	Creation of Conservation Consciousness	10,000.00	5,000.00	15,000.00
CARITAS	Production project in a poor area (Matapalo)	1'000,000.00	0.00	1'000,000.00
Private sector				
Piura Hunting, Fishing and Tourism Club	Internal zoning proposal for El Angolo Game Reserve	46,000.00	80,000.00	126,000.00

APPENDIX 3: ACCIONES PROPUESTAS PARA ENFRENTAR LAS AMENAZAS EN LA RESERVA DE BIOSFERA DEL NOROESTE

CAT	AMENAZA	ACCIONES PROPUESTAS	LOGROS – PRODUCTOS
INMEDIATAS	Alto riesgo de desastres en infraestructura de vivienda y de producción a causa del Fenómeno de El Niño	Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad, así como de la forma de exponerse a desastres. Manejo de vulnerabilidades
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
	Cambio de Uso del Suelo (Transformación de hábitats, pérdida de la cobertura forestal)	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción
		Identificación de hábitats críticos	Focalización y priorización de las áreas
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
		Organización de usuarios	Organizaciones sólidas de usuarios por sectores
		Plan de recuperación de áreas degradadas	Areas recuperadas y/o en recuperación
	Contaminación de cuerpos de agua	Capacitación productiva para bajar uso de agroquímicos	Reducción de uso de agroquímicos
		Creación de conciencia de Conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Diseño de Sistema de Tratamiento de aguas: urbano, industrial	Propuesta para búsqueda de financiamiento
		Medición de niveles de contaminación e identificación de contaminación.	Niveles conocidos por sectores, contaminantes y fuentes
		Promoción del cultivo de la Chicama	Pozas rurales de cultivo y conservación de la Chicama
	Creciente asentamiento de inmigrantes en áreas naturales	Creación de conciencia de Conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
		Organización de usuarios	Organizaciones sólidas de usuarios por sectores
	Disminución del rendimiento económico en las actividades productivas	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción
		Organización de usuarios	Organizaciones sólidas de usuarios por sectores
		Promoción de productos obtenidos mediante técnicas sostenibles	Ampliación de mercados, mejora de los precios
	Elevado índice de delitos ambientales	Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Fortalecimiento de las instituciones de protección	Participación más activa e integrada de los órganos de protección y control
	Elevado riesgo de enfermedades a la fauna	Evaluación Rápida Ecológica en áreas claves	Estudios actualizados - línea base, identificaron de manifestación de amenazas y actores
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
	Instalación de asentamientos poblacionales y actividades productivas incompatibles con los objetivos de conservación	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción
		Creación de conciencia de Conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
	Limitada regeneración de especies silvestres	Evaluación Rápida Ecológica en áreas claves	Estudios actualizados - línea base, identificaron de manifestación de amenazas y actores
		Promoción a la recuperación de áreas degradadas	Instalación de viveros forestales. Acciones de reforestación dirigida
	Reducción de especies Endémicas y amenazadas	Actualizar Banco de Datos – status de biodiversidad	Mapa de distribución de especies, status y priorización
		Dimensionamiento de las amenazas	Dimensión residencia y actores en las amenazas
		Evaluación Rápida Ecológica en áreas claves	Estudios actualizados - línea base, identificaron de manifestación de amenazas y actores

INTERMEDIAS	Acentuado monocultivo, Baja calidad de producción	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción
		Promoción de productos obtenidos mediante técnicas sostenibles	Ampliación de mercados, mejora de los precios
	Extracción legal o ilegal de especies endémicas y amenazadas por encima de su capacidad de carga	Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Elaboración de planes de aprovechamiento directo de recursos naturales	Normas y lineamientos de manejo aprobados por la autoridad competente (INRENA)
		Evaluación Rápida Ecológica en áreas claves	Estudios actualizados - línea base, identificaron de manifestación de amenazas y actores
	Extracción por encima de capacidad de carga. Tala e incendios para agricultura	Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Elaboración de planes de aprovechamiento directo de recursos naturales	Normas y lineamientos de manejo aprobados por la autoridad competente (INRENA)
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
	Falta de oportunidades de empleo e ingresos a la población rural	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción
		Organización de usuarios	Organizaciones sólidas de usuarios por sectores
		Promoción de productos obtenidos mediante técnicas sostenibles	Ampliación de mercados, mejora de los precios
	Fragmentación de la propiedad de la tierra	Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
		Promoción de productos obtenidos mediante técnicas sostenibles	Ampliación de mercados, mejora de los precios
	Gestión territorial ajena a los objetivos de conservación y desarrollo de la RBNO	Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
	Limitada presencia de autoridad de vigilancia ambiental	Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Fortalecimiento de las instituciones de protección	Participación más activa e integrada de los órganos de protección y control
	Mantenimiento del alto índice de vulnerabilidad a los efectos del Fenómeno de El Niño	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción
		Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
	Movimiento de tierras en ANP para proyecto de irrigación	Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
	Pesca con tóxicos, Uso de agroquímicos en los cultivos, medidas de saneamiento inapropiadas	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción
		Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Promoción de productos obtenidos mediante técnicas sostenibles	Ampliación de mercados, mejora de los precios
	Recurso hídrico de muy limitada disponibilidad	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
	Sistemas impactantes de producción (ganadería y agricultura nómades)	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción
		Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Elaboración de planes de aprovechamiento directo de recursos naturales	Normas y lineamientos de manejo aprobados por la autoridad competente (INRENA)
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
	Tránsito incontrolado de ganado (contrabando)	Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Fortalecimiento de las instituciones de protección	Participación más activa e integrada de los órganos de protección y control

FINALES	Acentuada variabilidad climática	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción
	Aplicación insuficiente de las leyes ambientales	Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Fortalecimiento de las instituciones de protección	Participación más activa e integrada de los órganos de protección y control
	Crecimiento poblacional	Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
	Desempleo/ sub empleo rural y bajos niveles de ingreso	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción
		Promoción de productos obtenidos mediante técnicas sostenibles	Ampliación de mercados, mejora de los precios
	Desempleo/ sub empleo. Falta de oportunidades para generar ingresos	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción
		Promoción de productos obtenidos mediante técnicas sostenibles	Ampliación de mercados, mejora de los precios
	Falta de aplicación institucionalizada de la zonificación de la RBNO	Capacitación a gobiernos locales en gestión ambiental	Conocimientos en ordenamiento territorial, saneamiento ambiental, ordenamiento de las actividades productivas
		Institucionalización del Comité de Gestión de la RBNO	Reconocimiento oficial del poder y facultades del Comité de Gestión de laRBNO
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
	Falta de capacitación en comercialización de RR.NN.	Promoción de productos obtenidos mediante técnicas sostenibles	Ampliación de mercados, mejora de los precios
	Falta de capacitación productiva en sistemas eficientes de uso del suelo y agua	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción
	Falta de control de las autoridades	Institucionalización del Comité de Gestión de la RBNO	Reconocimiento oficial del poder y facultades del Comité de Gestión de la RBNO
	Falta de incorporación del Fenómeno de El Niño en la planificación del desarrollo	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción
		Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
		Ordenamiento territorial	Formalización del ordenamiento (mapas, disposiciones, etc.)
	Gobiernos locales sin capacitación en saneamiento	Capacitación a gobiernos locales en gestión ambiental	Conocimientos en ordenamiento territorial, saneamiento ambiental, ordenamiento de las actividades productivas
	Represamiento o derivación del agua para irrigación	Creación de conciencia de conservación	Información general y especializada de los valores de diversidad biológica y su fragilidad
	Usuarios sin capacitación técnica productiva adecuada	Capacitación en actividades productivas	Aplicación de técnicas sostenibles en la producción, disminución de costos de producción

APPENDIX 4: INCREMENTAL COSTS MATRIX

	Baseline Activities	Alternatives	Increment (Alternatives less baseline activities)
Benefits r e environ nt	Support for formation of a mangrove forest Management Committee (Holland + Pronaturaleza) US $ 15,970	Official recognition of participatory management of the Biosphere Reserve and the mangrove forest. US$ 83,610	A.1 Follow up and support actions to achieve official approval of the reserve Strategy. US$ 67,640
	Planning of land use and productive activities in the mangrove forest (Holland). US$ 24,120	Ecological and economic zoning of the Biosphere Reserve and the mangrove forest, according to the provisions of the Strategy. US $ 113,630	A.2 Participatory planning processes for the management of productive activities US $ 89,510
	Actions to strengthen the mangrove forest Management Committee and Local Support Committee of the National Sanctuary (Holland). US$ 13,970	Management bodies recognized as official management bodies of the Biosphere Reserve and the mangrove forest. US $ 91,770	B.1 Actions to strengthen and consolidate the Management Committee US $ 77,800
	Sustainable use of mangrove forest resources (Holland) US $ 39,670	Outreach and training provided to rural populations and resource users of the Biosphere Reserve and the mangrove forest, orientated towards ecologically sustainable production. US $ 711,280	C.1 Design and implementation of outreach programs. US $ 118,760
	Training in the sustainable resource use in pilot schools (H.E.L.P.) US $ 4,010		
	Outreach work orientated towards forest management (Proyecto Algarrobo) US $ 300,000		
	Outreach work orientated towards the use of natural resources in Matapalo (FONCODES) US $ 248.840		
	Forest management models (Holland) US $ 39,670	Development of demonstration models of sustainable management of natural resources by communities in the buffer and cooperation zones of the Biosphere Reserve and the mangrove forest zone. US $ 615,160	D.1 Development of models for the sustainable use of natural resources by local communities. US $ 117,530
	Forest management models in pilot schools (H.E.L.P.) US $ 9,120		
	Protection and management of forest regeneration (P. Algarrobo) US $ 200,000		
	Integrated farm plots in Matapalo (FONCODES) US $ 248,840		
	Conservation education in pilot schools in the mangrove forest zone (Holland) US 4 19,270	Dissemination of knowledge and the promotion of attitude changes among local people and resource users in favor of conservation and sustainable resource use in the Biosphere Reserve and the mangrove forest. US $ 114,930	E.1 Social Communication Strategy for the conservation of the Biosphere Reserve. US $ 89,340
	Education in conservation and ecology in pilot schools in the Biosphere Reserve (H.E.L.P.) US $ 6,320		
nefits for th nation	Organization of resource users in the mangroves ecosystem (Holland) US $ 14,370	Strengthening the organization capacity of local people and resource users in the Biosphere Reserve and the mangrove forest to participate in environmental management. US $ 236,040	B.2 Strengthening local government and resource users' organizations. US $ 78,600
	Organization of local people in Matapalo (FONCODES) U $ 143,070		
	Dissemination of experiences of conservation and sustainable use of the mangrove forest (Holland) US $ 19,120	Dissemination of local and regional experiences of conservation management. US $ 108,790	D.2 Analysis and systematization of experiences. US$ 89,670

APPENDIX 5: DETAILED BUDGET BY DISBURSEMENT CATEGORY

COMPONENTS	COST	Months/ Quantity.	SUB TOTAL
PERSONNEL			352368.00
Program Director (60%)	1,260.00	36	45,360.00
Secretary – Administrator (70%)	630.00	36	22,680.00
Project Technical Director	1,650.00	36	59,400.00
Lima based Coordinator (50%)	900.00	30	27,000.00
Sociologist	1,125.00	34	38,250.00
Agronomist	1,125.00	18	20,250.00
Executive Director's time (4 %)	108.00	36	3,888.00
Director of Project's time (4 %)	90.50	36	3,240.00
Forestry Engineer	1,125.00	34	38,250.00
Social Communications Specialist	1,500.00	18	27,000.00
Teacher	1,125.00	12	13,500.00
Agro-forestry Technician	525.00	34	17,850.00
Agricultural Technician	525.00	34	17,850.00
Assistant Driver	525.00	34	17,850.00
SUB CONTRACTS			31,500.00
Legal advice	1600.00	6	9,600.00
Economic evaluations			7,200.00
Graphic design			7,200.00
Tumbes office infrastructure			4,500.00
Plans and maps			3,000.00
TRAINING AND PUBLICATION			87,950.00
Environmental Management and Land Use Planning	1,500.00	10	15,000.00
Strengthening social organizations			4,200.00
Use and conservation of natural resources.	1,000.00	5	5,000.00
Sustainable production systems.	1,600.00	10	16,000.00
Transformation and marketing.			5,250.00
Planning workshops	800.00	15	12,000.00
Biosphere Reserve Bulletin	300.00	15	4,500.00
Publicity materials	1,000.00	15	15,000.00
Staff training	1,000.00	6	6,000.00
Dissemination events	500.00	10	5,000.00
EQUIPMENT MAINTENANCE AND SERVICE			88150.00
Small 4 wheel drive vehicles (02)	16,000.00	2	32,000.00
Computers with modem (02)	1,400.00	2	2,800.00
Laser printer	500.00	1	500.00
Scanner	400.00	1	400.00
Electronic whiteboard	1,500.00	1	1,500.00
PC back projector	3,500.00	1	3,500.00
Office furniture			800.00
Telephone exchange	700.00	1	700.00
Services and office maintenance Piura	600.00	36	21,600.00
Service and office maintenance Tumbes	200.00	36	7,200.00

Vehicle and equipment maintenance			9,000.00
Software			1,000.00
Office materials for project team	150.00	36	5,400.00
Purchase of telephone line	350.00	1	350.00
Photocopier	1,400.00	1	1,400.00
TRAVEL			19800.00
Project team operations	300.00	36	10,800.00
Consultants	350.00	12	4,200.00
Pro Naturaleza Staff	700.00	12	4,800.00
EVALUATION MISSIONS AND M&E			14,000.00
Project supervision (Northwest Program Director and Pro Naturaleza Directors)			3,500.00
Monitoring and Evaluation	----------	----------	10,500.00
PROJECT ADMINISTRATION			112,500.00
CONTINGENCIES	----------	----------	22,582.00
TOTAL PROJECT COST			727,850.00
SFPP (06/03/98)			21,150.00
TOTAL			750,000.00

APPENDIX 6: DETAILED BUDGET BY ACTIVITIES

COMPONENTS	ACTIVITIES								
	A.1	A.2	B.1	B.2	C.1	D.1	D.2	E.1	SUB TOTAL
PERSONNEL									**352,368.00**
Program Director (60%)	5,670.00	5,670.00	5,670.00	5,670.00	5,670.00	5,670.00	5,670.00	5,670.00	45,360.00
Secretary – Administrator (70%)	2,835.00	2,835.00	2,835.00	2,835.00	2,835.00	2,835.00	2,835.00	2,835.00	22,680.00
Project Technical Director	5,940.00	5,940.00	5,940.00	5,940.00	14,850.00	11,880.00	8,910.00		59,400.00
Lima based Coordinator (50%)	3,375.00	3,375.00	3,375.00	3,375.00	3,375.00	3,375.00	3,375.00	3,375.00	27,000.00
Sociologist	3,825.00	3,825.00	7,650.00	9,562.50	3,825.00	7,650.00	1,912.50		38,250.00
Agronomist		3,037.50	2,025.00	2,025.00	6,075.00	5,062.50	2,025.00		20,250.00
Executive Director's time (4%)	486	486	486	486	486	486	486	486	3,888.00
Director of Project's time (4%)	405	405.00	405.00	405.00	405.00	405.00	405.00	405	3,240.00
Forestry Engineer		5,737.50	3,825.00	3,825.00	11,475.00	9,562.50	3,825.00		38,250.00
Social Communi-cations Specialist							10,800.00	16,200.00	27,000.00
Teacher		1,350.00		1,350.00	1,350.00	1,350.00	2,700.00	5,400.00	13,500.00
Agro-forestry Technician					7,140.00	10,710.00			17,850.00
Agriculture Technician					10,710.00	7,140.00			17,850.00
Assistant Driver	2,231.25	2,231.25	2,231.25	2,231.25	2,231.25	2,231.25	2,231.25	2,231.25	17,850.00
SUB CONTRACTS									**31,500.00**
Legal advice	2,880.00	1,920.00	2,880.00	1,920.00					9,600.00
Economic evaluations					3,600.00	3,600.00			7,200.00
Graphic design							2,880.00	4,320.00	7,200.00
Tumbes office infrastructure	562.5	562.5	562.5	562.5	562.5	562.5	562.5	562.5	4,500.00
Plans and maps	1,500.00	1,500.00							3,000.00

TRAINING AND PUBLICATION									87,950.00
Environmental Management and Land Use Planning	4,500.00	3,000.00	3,000.00	4,500.00					15,000.00
Strengthening social organizations			1,680.00	1,680.00		840			4,200.00
Use and conservation of natural resources		2,000.00			1,500.00	1,500.00			5,000.00
Sustainable production systems.		3,200.00			6,400.00	6,400.00			16,000.00
Transformation and marketing.					2,625.00	2,625.00			5,250.00
Planning workshops		9,000.00	3,000.00						12,000.00
Biosphere Reserve Bulletin							1,350.00	3,150.00	4,500.00
Publicity materials							6,000.00	9,000.00	15,000.00
Staff training	1,200.00	1,200.00			1,200.00	1,200.00	600	600	6,000.00
Dissemination events							1,500.00	3,500.00	5,000.00
EQUIPMENT MAINTENANCE AND SERVICE									**88,150.00**
Small 4 wheel drive vehicles (02)	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	32,000.00
Computers with modem (02)	350	350	350	350	350	350	350	350	2,800.00
Laser printer	62.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5	500
Scanner	50	50	50	50	50	50	50	50	400
Electronic whiteboard	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	1.500.00
PC back projector	437.5	437.5	437.5	437.5	437.5	437.5	437.5	437.5	3,500.00
Office furniture	100	100	100	100	100	100	100	100	800
Telephone exchange	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	700
Services and office maintenance Piura	**2,700.00**	**2,700.00**	**2,700.00**	**2,700.00**	**2,700.00**	**2,700.00**	**2,700.00**	**2,700.00**	**21,600.00**
Services and office maintenance Tumbes	900	900	900	900	900	900	900	900	7,200.00
Vehicle/equipment maintenance	1125	1125	1125	1125	1125	1125	1125	1125	9,000.00

Software	125	125	125	125	125	125	125	125	1,000.00
Office materials for project team	675	675	675	675	675	675	675	675	5,400.00
Purchase of telephone line	43.75	43.75	43.75	43.75	43.75	43.75	43.75	43.75	350
Photocopier	175	175	175	175	175	175	175	175	1,400.00
TRAVEL									19,800.00
Project team operations	1350	1350	1350	1350	1350	1350	1350	1350	10,800.00
Consultants	630	630	630	630	840	840			4,200.00
Pro Naturaleza Staff	600	600	600	600	600	600	600	600	4,800.00
EVALUATION MISSIONS AND M&E									14,000.00
Project supervision (Northwest Program Director AND Pro Naturaleza Directors)	437.5	437.5	437.5	437.5	437.5	437.5	437.5	437.5	3,500.00
Monitoring and Evaluation (1%)	1312.5	1312.5	1312.5	1312.5	1312.5	1312.5	1312.5	1312.5	10,500.00
CONTINGENCIES									22,082.00
Contingency (aprox 3%)	2,822.75	2,822.75	2,822.75	2,822.75	2,822.75	2,822.75	2,822.75	2,822.75	22,582.00
PROJECT ADMINISTRATION									112,500.00
Recovery Indirect Costs Pro Naturaleza	14,062.5	14,062.5	14,062.5	14,062.5	14,062.5	14,062.5	14,062.5	14,062.5	112,500.00
SUBTOTAL	67,643.75	89,508.75	77,798.75	78,601.25	118,758.75	117,528.75	89,671.25	89,338.75	728,850.00
SFPP(06/03/98)									21,150.00
								TOTAL	750,000.00

APPENDIX 7:

ESTABLISHMENT OF THE MANAGEMENT COMMITTEE

The establishment of the Management Committee was one of the first actions initiated as a result of agreements reached with the stakeholders. The aim was to bring together the largest possible number of existing interest groups in the ambit of the reserve, to ensure that the Committee was a truly representative body. To prevent the Committee from becoming unwieldy, the structure adopted was that of a delegate assembly.

INTEREST GROUPS

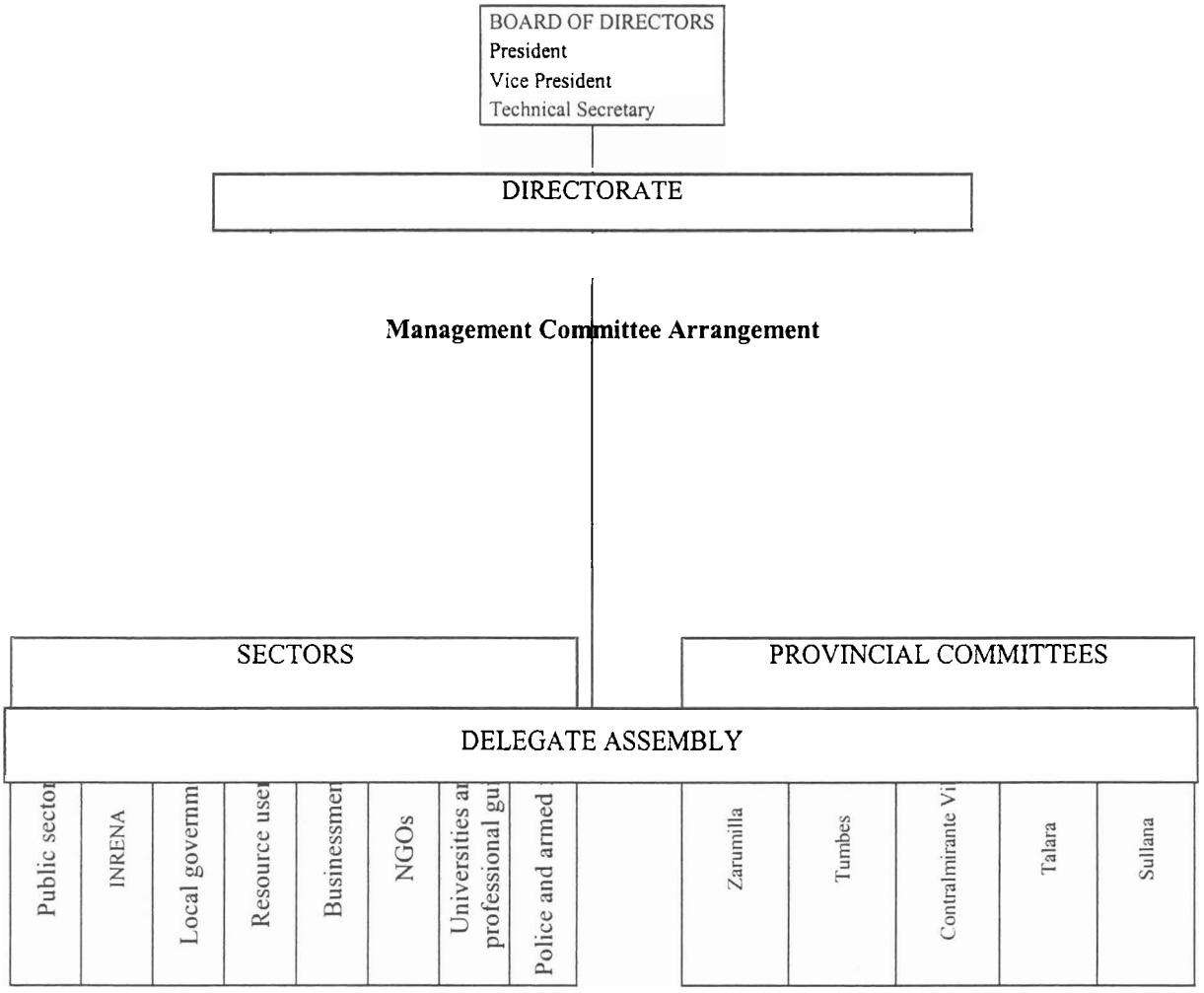
Similarity of interests among the different stakeholders made it possible to divide them into interest groups, which ensured equity of representation. The interest groups identified are shown in Table No.1.

Table No. 1: Interest groups represented in the Northwest Biosphere Reserve Management Committee Directorate.

Sector	Group represented
Public sector	All the regional and sub-regional directorates of the various government ministries, and their decentralized agencies.
INRENA	Chiefs of the protected areas, and INRENA regional and sub-regional directorates.
Local government	All the district and provincial councils within the ambit of the Northwest Biosphere Reserve
Resource users	All rural people who are consumers of the natural resources of the reserve.
Businessmen	All businesses and people with investments in natural resource development in the reserve.
NGOs	All non profit-making institutions working for the conservation and/or development of the Northwest Biosphere Reserve.
Universities and professional guilds	All universities and professional guilds undertaking academic and research work in the reserve.
Police and armed forces	Armed forces dependant on the Ministry of Defense, and police forces dependant on the Ministry of the Interior.

PROVINCIAL COMMITTEES

Stakeholders in the Northwest Biosphere Reserve can be grouped together according to the watershed area in which they operate, which coincide with the political division of the area into the following provinces: Zarumilla, Tumbes, Contralmirante Villar, Talara and Sullana. Provincial Committees have been set up as decentralized bodies within the Management Committee. Each Provincial Committee has a coordinator who chairs their working meetings, and also represents the province of the Management Committee Directorate.


BOARD OF DIRECTORS
President
Vice President
Technical Secretary
DIRECTORATE
Management Committee Arrangement
SECTORS
PROVINCIAL COMMITTEES
DELEGATE ASSEMBLY
Public sector
INRENA
Local governm
Resource user
Businessmen
NGOs
Universities ar
professional gu
Police and armed
Zarumilla
Tumbes
Contralmirante Vi
Talara
Sullana