UNDP Project Document

Government of Nicaragua

United Nations Development Programme

Title of Project
Strengthening and Catalyzing the Sustainability of Nicaragua's Protected Area System
PIMS 3422
Project ID 00055603

Nicaragua is an important component of the Central American biological corridor, providing habitat and gene movement to globally important species. Past and current efforts are not sufficient to reduce the threats to biodiversity within Nicaragua's PAs, leading to habitat decline, fragmentation of ecosystems, and loss of species diversity. The current situation is unsustainable and does not afford adequate protection for biodiversity. A GEF funded project is necessary to improve system-level capacity through overcoming existing institutional and systemic barriers to effective PA management. Strengthened capacity of SINAP at the system level will be complemented by engaging key stakeholders such as sectoral Ministries, municipalities, co-managers as well as the private landowners and labourers. This strategy will promote, over the long term, improved PA site-level management and financing and catalyze future donor assistance. The project is proposed to be for four years and has been designed to: (i) Improve the national enabling environment so that the legal, policy and strategic frameworks are in place to allow SINAP to function more effectively. This will include key legal reforms and adoption of an updated master strategy for SINAP detailing its process for decentralization, coverage and management. (ii) Share the responsibilities of PA management across all relevant stakeholders including Ministries, regional government bodies, municipalities, private landowners and concessionaires and NGO co-managers. The project will support establishing and strengthening multi-stakeholder institutional structures so that they are operational and have capacity to engage stakeholders in PA management. This component will also develop the capacities of stakeholders, primarily landowners within PAs, to work with the PA authorities on biodiversity friendly economic activities. (iii) Improve SINAP's financial situation through transforming its financing system to generate, retain and account for funds and more effectively invest them at the site level. Reforms will also improve financing possibilities and create incentives (and reduce disincentives) for private producers within PAs to develop production in harmony with biodiversity conservation. (iv) Institutionalize the learning within the project and MARENA for broader uptake, sustainability and replication.

Table of Contents

List of Tables and Charts

List of Acronyms

ADAGUAS	Water Administration Authority/MIFIC
ADGEO	National Geologic Resources Administration/MIFIC
CAM	Municipal Environment Commission
CATHALAC	The Water Centre for the Humid Tropics of Latin America and the Caribbean
CBA	Biological Corridor of the Atlantic
CBD	Convention on Biological Diversity
CBM	Mesoamerican Biological Corridor
CCAD	Central American Commission of Environment and Development
CDM	Municipal Development Committee
CMC	Coordination and Monitoring Commission
CEPAD	The Council of Evangelical Churches of Nicaragua
CIRA	Aquatic Research Institute
CITES	Convention on International Trade in Endangered Species
CAM	Municipal Environment Commission
DANIDA	Danish International Development Agency
DGAP	General Directorate for Protected Areas
DGBRN	General Directorate for Biodiversity and Natural Resources
DR-CAFTA	Dominican Republic-Central America-U.S. Free Trade Agreement
ERCERP	Economic Growth and Poverty Reduction Strategy
FFI	Fauna and Flora International
FUNDAR	Foundation of Friends of Rio San Juan
FUNCOD	Nicaraguan Foundation for Conservation and Development
FSP	Full Size Project
GEF	Global Environment Facility
GNI	Gross National Income
GoN	Government of Nicaragua
GRAAS	Government of the Autonomous Region of the South Atlantic
GTZ	German Technical Agency of Cooperation
HIPC	Initiative for Heavily Indebted Countries
IDR	Rural Development Institute
INAFOR	National Forestry Institute
INTA	Agro (&livestock) Technological Institute
INTUR	Nicaraguan Tourism Institute
IRENA	Institute of Natural Resources
M	Million
MAGFOR	Ministry of Agriculture and Forestry
MARENA	Ministry of Environment and Natural Resources
METT	Management Effectiveness Tracking Tool
MIFIC	Ministry of Finance, Industry, and Commerce
NEX	National Execution
NGO	Non-Governmental Organization
NPC	National Project Coordinator
NPD	National Project Director

PA(s)	Protected Area(s)
PANIC	Policy and Environmental Plan of Nicaragua 2001-2005
PASMA	Environment Support Project: DANIDA
PASP	Protected Areas Strategic Program
PMU	Project Management Unit
PND	National Development Plan
RAAN	Autonomous Region of the North Atlantic
RAAS	Autonomous Region of the South Atlantic
RAF	Resource Allocation Framework
RBB	Bosawas Biosphere Reserve
RBSEN	South Eastern Nicaraguan Biosphere Reserve
S	Semester
SEPCA	Presidential Secretariat for Atlantic Coast Affairs
SEPCA	Secretariat for Atlantic Coast Affairs
SERENA	Secretariat for Natural Resources (Autonomous Regions)
SICAP	Central American Protected Area System
SINAP	National Protected Areas System
SINAPSIS	National Protected Wild Areas System
SINIA	National Environmental Information System
SPN	National Parks Service
TA	Technical Assistance
UAM	Municipal Environmental Unit
UCA	Central American University
UNCBD	United Nations Convention on Biological Diversity
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UPONIC	Poly-technical University of Nicaragua
WWF	World Wildlife Fund
Y	Year
ZEPDT	Special Zones Planned for Tourism Development

SECTION I: ELABORATION OF THE NARRATIVE

PART 1: SITUATION ANALYSIS

Context and Global Significance

1. Nicaragua has a warm tropical climate dominated by moist easterly trade winds with alternating wet and dry seasons. This in combination with Nicaragua's varied topography produces three distinct climatic regions with a mosaic of terrestrial and marine ecosystems that support exceptional species diversity. Given its geographic position in the narrow Central American isthmus, Nicaragua is an inflection point for biodiversity forming a transition zone from tropical to sub-tropical climates where the ranges of distribution of globally important species converge. Conversely, the San Juan River, that divides Nicaragua and Costa Rica, marks an insurmountable physical barrier for other groups of species, making Nicaragua the northernmost distribution limit for species of the southern hemisphere (e.g. primates and marsupials) and the southernmost limit of many species of the northern hemisphere (e.g. Caribbean pine trees, coyotes and pumas). Nicaragua's 11 distinct ecoregions[1] and 53 natural ecosystems[2] including 28 types of forest (including 3 types of mangroves), 7 types of savannah, and 7 types of aquatic ecosystems[3] contribute to the Meso-american Biodiversity Hotspot, which spans from central Mexico to the Panama Canal. Among these there are ecosystems unique to Nicaragua, such as the tectonic (crater) lakes Xolotlán and Cocibolca that provide unique habitat for endemic ichthyologic fauna. In addition, 13 man-made, productive ecosystems, such as coffee stands or pasture systems are described. Biodiversity is distributed from North to South along the Pacific and Atlantic flanks of Central America's mountainous continental divide where the isolation of biota have led to two chains of connected ecosystems with separate natural histories.

2. Along these flanks, globally important species, whose regional endemism rates are approximately 15% for mammals, 17% for (higher) plants, 19% for birds, 35% for reptiles, 65% for amphibians, and 67% for freshwater fishes, depend on the continuity of ecosystem chains for their maintenance[4] (see also Section IV, Part IX for Nicaraguan environmental data). To maintain habitat for the migration and maintenance of this species diversity, Nicaragua has subscribed to regional conservation efforts to assure the connectivity and contiguity of these ecosystems through participation in the establishment of biological corridors. Among these are the *Paseo Pantera* (Panther Pathway) to which Nicaragua contributes the Gulf of Fonseca biological corridor (4 Protected Areas – PAs-) and the San Juan – La Selva bi-national corridor (3 PAs); and to the and the Meso-american Biological Corridor, where Nicaragua contributes a chain of 24 protected areas across uninterrupted

[1] WWF defines an eco-region as a large area of land or water that contains a geographically distinct assemblage of natural communities that (a) share a large majority of their species and ecological dynamics; (b) share similar environmental conditions, and; (c) interact ecologically in ways that are critical for their long-term persistence.
[2] Using UNESCO criteria
[3] Meyrat, A. "State of Conservation of Nicaragua´s Ecosystems", MARENA 2002.
[4] Nicaragua's endemism rate is characteristically low (informally estimated at < 1%) due to its connectivity to regionally important ecosystems.

extensions of tropical and subtropical moist and wet humid forests in the extended plains of the Atlantic slope (see the Detailed Description of SINAP, Section IV, Part IX).

3. To protect biodiversity from anthropogenic threats, Nicaragua has designated approximately over 2.2 million, hectares[3] (18% of the national territory) with protected area status These areas are consolidated into the National Protected Areas System (SINAP) that comprises 76 Protected Areas (PAs) divided into 3 sub-regions: (a) Pacific with 26 PAs covering 8% of the system; (b) Central with 25 PAs covering 8% of the system; and (c) the Atlantic region with 25 PAs organized into 2 biosphere reserves that comprise 85% of the system. The former, the Pacific and Central sub-regions are located in the Pacific flank, and the latter, at the name implies, in the Atlantic or Caribbean flank. These are defined within 9 management categories as presented in Table 23.

4. SINAP is unique in that an estimated 95% of the territory with "protected" status is private property with ongoing socio-economic activities. Only 3 PAs in the system (1%) fit the "Park" concept with limited access and a high degree of protection on publicly owned land. In fact, 46% of SINAP are "Natural Reserves" where "sustainable" production activities are permitted. With the exception of the original 3 PAs (declared 1958 through 1983) all PAs have been designated without input or consent from the landowners who challenge the jurisdiction of the Ministry of Natural Resources' (MARENA) Protected Areas Directorate (DGAP) over their lands. These areas are largely "paper parks." without financing, management, conservation management, or infrastructure. To date, very few effective legal, institutional or administrative mechanisms have been undertaken to facilitate the active involvement of the private sector to address this conflictive relationship. Therefore, diverse economic activities are undertaken within and around PAs in support of local livelihoods (see Table 17, Section IV, Part VII). , which are summarized as follows:

5. In the Pacific region, 40% of the economic activity is found within forests and forest plantations (68,349 Ha.). Mixed farming and livestock covers 7% of the area (13,298 Ha.) and intensive agricultural systems with 5% of the total area (7,886 has.). Shrimp farming is as prevalent as agriculture with 4.3% or 7,293 Ha. Extensive livestock systems are noted on 1% of the area (1,716 Ha.). A PDF-B analysis provides detailed information from target 4 PAs that were selected for site-based activities under the FSP, based on their varying bio-physical, socio-economic, ethnic characteristics, and for the potential to provide lessons learned in sustainable financing [5] The following are snapshots from two PAs within this region:

- In Estero Padre Ramos important estuary, coastal and marine habitats are subject to ecosystem fragmentation that places exceptional pressures on the remaining natural areas for environmental goods and services. These areas are impacted by the effects of deforestation, such as sedimentation of waterways and sediment choking of mangroves due to soil loss from agricultural activities in adjacent areas in the upstream environments and to local changes in ecosystems due to clearing and levelling of land for shrimp production. Inadequate treatment of wastewater from these businesses contributes to increased salinity.
- Pilas/El Hoyo is a lowland PA where the lowland broadleaf deciduous forest is now listed as scarce, demonstrating negative effects in composition due to the extraction of

[3]Protected Areas National Report, 2003
[5] Citar el studio de Nica Tierra.

hardwoods, firewood, and extensive seasonal grazing and the use of fire. In reality, there are no remaining "intact" remnants of the mentioned ecosystem. Unregulated hunting is also a factor. In the lowland successional deciduous broadleaf forest on Lava, the extraction of lava rocks for construction and gravel production, the utilization of the area as a municipal dumping site is common. The extraction of aerial roots for artisan crafts and hunting for doves and quail, and the extensive use of fire are all listed as factors that threaten ecosystem composition, quality, and integrity.

6. By comparison, the Central region is higher in elevation, more forested, and less fragmented with a higher concentration of Forestry and Forest Plantations occupying 82% of the surface area (478,206 Ha.). Agricultural-livestock systems account for 16% of the area (96,068 Ha.) with agro-forestry and coffee with shade amounting to only 1% (7,686 Ha.). Here, the populations of emblematic bird species, such as the Three-wattled Bellbird (*Procnias tricarunculata.*) and the Quetzal (*Phromachrus mocinno.*) have suffered reductions in local populations to less than 500 individuals and are demonstrating the effects of genetic simplification[6] Related to habitat fragmentation. This region is under significant pressure from forestry concerns that do not utilize appropriate harvest practices, transportation infrastructure and maintenance of genetic viability, in addition to the following examples:

- The deforestation in Datanli/El Diablo in the Cerro El Diablo is caused by expansion of short cycle field crops and pasture on slopes above 40% and due to the harvest of firewood and other wood products in the areas only appropriate for conservation. This increases the risks of further damage to the site by the effects of erosion of topsoil and long-term fertility loss. A demographic explosion within the PA is causing further settlement-related pressures on the landscape, such as land levelling, informal road building, and changes in drainage. Contamination of surface water with coffee residues during harvest times and the use of agrochemicals are reported.
- The cloud forest ecosystem of Dipilto/Jalapa is in a critical state due to the advance of shade-less coffee stands towards the highest forests and due to the extraction of orchids and ornamental plants. Agricultural fires and unregulated, extensive grazing practices of livestock are factors that are affecting native flora and fauna and the adequate recovery of sites following shocks.

7. In the Atlantic region, 80% of the productive activities are found within the forest ecosystems and productive forest ecosystems, (1,257,724 Ha.), with 6 % under extensive grazing with 25-50% tree cover (88,691 has) and 3% in mixed livestock-agriculture systems (39,751 has). This region is home to the largest biosphere reserves that, have the most restrictive management categories in terms of protection. However, their remoteness makes them more difficult to patrol and control, and their exposure to large rivers and the sea make extraction of a commercial size possible, such is the case with large-scale illegal logging or trapping. The Nicaraguan Environment Report for 2003 indicates that 120,000 hectares/year are converted from forest to other uses, predicting that, if the trend continues, the agricultural frontier will have reached the Caribbean Coast by the year 2050.

[6] Análisis y Diagnóstico Socioeconómico de Áreas Protegidas. Jirón, A. 2006. MARENA, Proyecto GEF – SINAP. 148 pp. y Diagnóstico Biofísico y Estudio Ecológico del Área Protegida Datanlí – El Diablo. NICATIERRA. 2006. MARENA, Proyecto GEF –SINAP. 66 pp.

8. For Nicaragua, the third poorest country in the hemisphere, balancing the demands of economic development with biodiversity conservation is a challenge. Nicaragua is a rural nation (66% of population) that depends on ecosystem provisioning services to sustain livelihoods. With a per capita income of U.S. $703 (base 2000) and 68% of the rural population living in poverty,[7] this situation affects most notably minority and indigenous groups[8] and those populations living in Northern and eastern Nicaragua that rely on predominantly on agriculture for their subsistence. Poverty is associated with the enormous inequity in the distribution of income, consumption and land tenure anomalies, high unemployment and fertility rates, and limited access to basic services and infrastructure. Given the 2.4% growth rate of the population, the future demand for environmental provisioning services[9] will steadily increase in the decades to come.

9. Nicaragua is suffering the economic declines that are a product of a 2-decade debt burden, low productivity, and the impacts of Hurricane Mitch in 1998, and lacks the tax base to meet the demands for public investments and social development. In response, the nation has adopted a growth oriented National Development Strategy and free-market mechanisms and that will stimulate "clusters" in 8 economic sectors, 5 of which include the activities found within PAs namely: aquaculture, tourism, fishing, mining and forestry. To stimulate investment, Nicaragua signed the Dominican Republic-Central America-U.S. Free Trade Agreement (DR-CAFTA) and has qualified for investments of above $33 Million U.S. for economic stimulus through the U.S. Millennium Challenge Account. These investments will increase economic activity within the mentioned clusters and will intensify the threats to biodiversity (see Section IV, Part IX for debt and economic growth scenario).

10. In response to these drivers, The DGAP and SINAP are ineffective in providing adequate protection to biodiversity for several fundamental reasons. First is the exclusion of and under-representation of at lease 10 important ecosystems. Secondly, over 50 of 76 PAs in the system have no investment by DGAP for their management, vigilance, or conservation programmes. Of the 26 remaining areas, the level of management effectiveness was determined during the PDF-B phase to be below a level capable of contributing to biodiversity conservation. These low levels of performance are contributed to serious financial and managerial constraints to be described herein. In addition to these inadequacies, there is also great concern about the effectiveness of the environmental controls that accompany economic sector development plans that do not involve DGAP in the planning phase, participating instead on a consultative basis late in the economic development process.

11. This situation implies a potential loss of almost half of the country's biodiversity and loss of connectivity of habitat for the maintenance and migration of Central American and global species within the next 4 decades and presents a significant problem for sustained and long-term biodiversity conservation in Nicaragua and in meeting regional and global conservation objectives. Limited infrastructure, management capacity, and financing for conservation and the de-linkage of DGAP from landowners and the economic sector drivers at a time of accelerated economic growth suggests that threats to biodiversity will increase resulting in increased fragmentation and degradation of ecosystems, loss of biological connectedness, decreases in the national gene pool and genetic flow with the remaining areas

[7] Living Conditions Survey 2001, see the Nicaraguan Statistics and Census Bureau (INEC) web page.
[8] Seventy-seven percent of the rural population on the Atlantic Coast are counted as poor (INEC, 2001).
[9] Water, food, fuel, etc.

along the Atlantic and Pacific ecosystem chains. The IUCN red book for Nicaragua, for example, lists 58 endangered and threatened plant and animal species.[10] There are however many well known exclusions,[11] for example the endemic fishes that inhabit the limited and unique crater lake habitats. Due to this inadequate and outdated information base[12], the full impact of ecosystem degradation on Nicaragua's declining species diversity is not fully understood. Declines in national ecosystem provisioning and sustaining services, upon which the rural poor are particularly dependent, are foreseeable and likely to lead to increased pressure on natural systems.

12. The nexus between poverty, destruction of habitat, and civility is embraced by the UNDP/Nicaragua CCA and is addressed by UNDAF action area 2.4. Within this context, the UNDP, MARENA (DGAP) and stakeholders have developed the following proposal for a GEF alternative that will conserve critical ecosystems through a response to the barriers that limit the appropriate management of SINAP as an effective instrument in biodiversity conservation. The project, described herein will work to remove policy, management capacity, and financial barriers at the system level while combining actions at the site level to test improved management systems in 4 PAs and to develop effective strategies that respond to the private sector, economic development agenda in an additional 7 PAs in the Pacific and Central regions. System level coordination at the policy level will be developed with the regional authorities of the autonomous regions.

Threats, Root Causes, Barriers Analysis

Threats and Root Causes

13. Nicaragua's biodiversity is *threatened* by: (a) the uncontrolled and unregulated transformation of forested ecosystems to other structurally and functionally simplified productive systems and (b) the overexploitation of the nation's natural resources, The previous section presented examples of economic activities that *transform ecosystems.* These are inadequate land uses associated with the expansion of the agricultural frontier for both small-scale subsistence systems and for commerce, small-scale and large. This threat is driven by economic necessity and opportunities and underscored by multiple root causes.

14. *The Overexploitation of* multiple species have minimized populations throughout SINAP. These species include those found in the *Cichlidae* family, crustaceans (lobsters and shrimps), snook (róbalo - *Centropomus spp*.), snapper (pargo - *Lutjanus spp*.), and shark (*Carcharhinus spp*.) families with commercial value. The highest pressure is on the reptiles due to the national and international skin trade, as is the case with the Crocodiles, (*Crocodylidae).* Trading in exotic bird species, such as the *psittacines (macaws, parrots and parakeets)* causes tremendous pressure on local populations as is the case of mammals who suffer from additional pressures of habitat destruction due to deforestation and from illegal hunting. The extraction of valuable hardwoods, such as Mahogany (*Swetenia macrophyla*) is

[10] IUCN. 1996. Las especies del libro rojo. Naturaleza (Nicaragua) 7:12-21.

[11] .Weaver, P.L; Lombardo, D.M. y J.C. Martínez Sánchez. 2003. Biodiversity and Tropical Forest Conservation, Protection and Management in Nicaragua: Assessment and Recommendations. Final Report. 38 pp.

[12] UCA. 2002. Cuadernos de Investigación. Managua, Nicaragua. 47 pp.

both extensive in large-scale wood trafficking operations and in small-scale single extractions by poor families seeking additional income. In spite of CITES regulations (see Table 14, Section IV, Part IX), Nicaragua continues to be an exporter of tropical mahoganies and other hardwoods to regional markets drastically reducing local sources and contributing to loss of ecosystem structure and function. These activities should be regulated by the Ministry of Finance, Industry, and Commerce (MIFIC) and based on management plans for both the business and for the protected area. The lack of these documents leads to the economic development activities being implemented without the required authorization. The informality of arrangements and lack of presence of DGAP contribute to this problem.

15. The threats are driven by inter-connected, underlying *root causes* that are:

- The dominance of private property ownership of the protected areas: These landowners do not recognize the legitimacy MARENA authority over their lands.
- Undervaluation of resources: Many of the mentioned activities take advantage of a broad range of environmental goods and services provided by the ecosystems that are "free" goods with no additional costs above those of extraction, or penalize for negative externalities. Conversely, there are no incentives for those who produce positive externalities or incentives to employ clean technologies. There is an existing tax exemption article that provides incentives for equipment or expenses in favour of conservation, but little awareness of this or a functional mechanism to apply it. Without incentives to the contrary, incentives to economic development will influence the future condition and distribution of habitat within PAs.
- Policies that assign higher priority to economic development over biodiversity protection (see barriers)
- Skewed land tenancy and anomalies: Land ownership uncertainties do not allow the private sector, at any scale of ownership, to have a long-term vision or stewardship. Instead, a short-term vision prevails, favouring maximum profit-taking over a short time horizon, generally at the expense of natural resources. A different situation dealing with Indigenous territorial claims in the North and Atlantic Coast also contributes to this threat. Very recently, a legal framework has been created (Law 445) for territorial land marking and legalization of indigenous territories. This causes social conflicts in the form of land invasions by non-indigenous peasant farmers attempting to secure a land claim before conversion. Land grabbing leads to the clearing and permanent conversion of thousands of hectares of forest.
- Dis-incentives to compliance with conservation: Landowners who have had their properties either totally or partially affected by the designation of PAs must produce management plans for their individual concerns. The individual plan must conform to the PA management plan, which often do not exist. The landowners in remote areas receive no additional benefit from compliance in comparison to those who do not. The requirements for both types of management plans are extensive and often require a larger financial commitment than the landowner is able or willing to afford.
- Inadequate production practices: Inadequate production practices such as the uncontrolled use of fire for agricultural transformation and debris management and for pasture maintenance and renewal damages. Man-made forest fires consume vast

forest areas in Nicaragua with most of them being provoked by agricultural activities (felling and burning), lack of controls in forest plantations, or careless use of fire over which there is insufficient control, due to insufficient infrastructure, training and inter-agency coordination.. Nicaraguan pine forests and dry forests are eco-regions that are particularly susceptible threatened by forest fires.

- The poor design of public infrastructure is a factor associated with settlement expansion within PAs. Improperly sited villages and roads leads to changes in drainage patters and increased run-off. Inadequate maintenance of road drainage systems leads to gulley erosion and later torrent streams that ruin more land. The unplanned expansion of roads for commercial timber extraction and agriculture-related commerce leads to increased economic activity and settlements that increase the expansion of the agricultural frontier by enhancing the transportation of commodities.
- Poverty is a cross-cutting factor that contributes to the preference of economic development over environment and leads to the undervaluation of resources and environmental degradation in the form of small-scale extractions, where poor peasants sell precious woods for as little as $30.00 U.S. per tree, or practice unregulated agriculture and grazing.

Barriers

16. The threats and root causes are exacerbated by an inadequate representation of ecosystems within SINAP and that 50 of 76 areas within the system have no management presence due to profound policy, management, and financial constraints. Finally, DGAP is not connected to the economic development sectors or to the private landowners creating a gap to effective planning and resolution of conflicting interests.

Barrier 1: Policy constraints reduce SINAP visibility, effectiveness, and revenues.

17. The effective management and financing of SINAP is limited by policy constraints that (1) assign greater priority to economic growth than biodiversity conservation; (2) reduce visibility of SINAP within the bureaucracy; (3) limit sustainable financing; (4) limit future policy development due to an inconclusive decentralization process.

18. Economic growth is assigned greater budgetary importance than the protected areas in spite of the potential of the system to generate employment, revenues and foreign exchange through tourism and environmental services. Funding for protected areas is seen as a cost, and Nicaraguan policy-makers are not aware of PA benefits to their national economy, which is heavily dependent on ecosystem services. There has not been an adequate valuation of the productive activities, ecosystem services, and biodiversity values that would enable an adequate and holistic interpretation of the subject to decision-makers at all levels.

19. Concurrently, SINAP is buried within the DGAP, invisible to Nicaraguan decision-makers. The system does not appear on treasury statistics thus impeding financial analysis, lobby, and increased budget allocations. Apart from the members of the Congressional Environment Committee, who receive an annual report from DGAP, those who allocate national resources are uninformed about SINAP and unaware of its financial situation.

20. The DGAP and MARENA are not legally enabled to speculate with national funds or participate in fiduciary mechanisms that could add value or create sustainable revenues that could cover the recurrent costs of operations of SINAP, excluding even deposits into high interest accounts in Nicaragua's central bank. MARENA can levy administrative sanctions for environmental damages or environmental compensation, but these are generally destined to other areas within MARENA and not to the support of protected areas. This policy matter seriously limits the development of sustainable financial mechanisms. Similarly, fines levied by MARENA for illegal activities or sanctions for environmental damages generated within protected areas can not be re-invested into the system. Nicaraguan law determines that only the National Assembly, through Law, can enable the treasury to determine such charges, be it in the form of taxes, services or other special contributions and earmark them accordingly.

21. The legal instrument that covers and regulates the management of the protected areas does not have the judicial force to establish quotas, tariffs, concessions or any other type of income generated from visitors or other use of protected areas. These roles are reserved for the Ministry of Finance, Industry, and Commerce (MIFIC) and to the National Tourism Institute (INTUR) who collect on concessions for activities generated within PAs in energy, tourism, forestry, fishing, and aquaculture. There is no official mechanism for compensation to the protected areas that supports those activities, creating yet another policy consideration that impedes sustainable financing. MARENA has responded through bi-lateral agreements with MIFIC and INTUR to authorize productive activities. These do not however create revenues for PAs nor are they stable through changes in political administrations. In addition, charges by the government for activities on non-state lands is questioned by the landowners.

22. Due to a presidential regulation that mandates that a 10% surcharge to MARENA on all revenue producing activities, revenues generated within PAs are not reported by NGOs, tour operators, or others. The regulation has the effect of a tax on businesses and NGOs that should, in reality, be given incentives to generate more revenues. The avoidance of the surcharge causes businesses and co-managers to find creative ways to avoid reporting revenues hence contributing to a lack of adequate financial information on the actual investments to SINAP by the private sector.

23. The most significant policy issue is the inconclusive decentralization process. The policy environment is compounded by the divided responsibility for management of environment and natural resources between MARENA and the governments of the Autonomous Regions of the North Atlantic and South Atlantic Coast (RAAN and RAAS respectively), who are legally mandated with the management of their territories. However, natural resources are national patrimony with custodian responsibilities mandated to MARENA. MARENA will not decentralize their authority, but will decentralize administrative functions (termed "de-concentration"). Issues, such as the responsibilities for protected areas management, are yet to be resolved. The gradual delivery of responsibility for the management of the Atlantic PAs is a complex issue and is a high priority for the local stakeholders. To date, MARENA's perception is that the demands of the autonomous regions have focused on transfer of budget and on the delivery of infrastructure, salaries, and vehicles rather than on the establishment of common objectives, management planning, and information sharing as a first step. The decentralisation process between MARENA and the Presidential Secretariat for Atlantic Coast Affairs (SEPCA) who manages indigenous affairs, have yet to clarify competences at the national, regional, and municipal levels. The

decentralization process is therefore stalled and in need of technical support, mediation, and new policies to move the process forward. The decentralization of PA management functions cannot therefore evolve until this central policy issue is clarified.

Barrier 2: Inadequate ecosystem representation in SINAP

24. Many ecosystems were protected by Executive Decree and not through a rigorous ecosystem-based and participatory process. Often times, arbitrary criteria, such as "all lands above 800 metres" were the basis for declaring PAs. Consequently, ecosystem representation within SINAP is unbalanced. A total of 16 ecosystems are listed as "scarcely represented", only 9 ecosystems are covered by PAs. See also Table 5 in Section IV Part IX for data on the representation of ecosystems. PA establishment based on ecosystem representation and conservation priorities criteria would enable the adequate allocation of resources. Without this foundation, there is a possibility that scarce resources may be allocated to areas of lesser biological importance thus reducing support needed for biodiversity conservation. It appears just as likely that several of the agricultural ecosystems may no longer contain nationally or globally important biodiversity, while others that have been listed as "well represented" may very well have significant gaps when studied appropriately.

Barrier 3: Inadequate information to support management and financing

25. DGAP has no reliable information on costs and revenues making financial analysis impossible. Only two Biosphere Reserves conduct an annual planning exercise which determines the administrative costs based on their management plans. The other areas receive funds from their respective territorial delegations or from specific projects that do not appear at the end of the year on any consolidated financial statement. Co-managed PAs and donors with direct involvement are not obligated to report their expenditures to DGAP making it impossible to track donor or NGO investments, accurately determine the financial baseline, or estimate real co-financing for national and international initiatives. Available information on costs is inaccurate due to inconsistency in nomenclature and lack of accounting standards for DGAP and for co-managers alike. For example, all costs are listed simply as "personnel costs" and "non-personnel costs" in compliance with government standard. This indicates that many capital assets are un-recognized, leading to a misinterpretation of the financing gap (see financial barrier). Management and financial information is often presented in different formats in response to donor preferences, is located in different offices, and requires a great deal of effort to procure, if at all,[13] causing an impediment to management accounting, analysis, or decision-making. The costs of SINAP that are borne by donor-driven projects are not flagged as temporary and thereby distorting the projection of financial soundness.

26. Indicators for management effectiveness are tracked in 16 PAs have been tracked by TNC over the last 5 years as part of a management monitoring system. The system however does not include indicators for management efficiency at the system-level. The management effectiveness indicators are a good first step for gauging the effectiveness of co-managed PAs. This does not include the unmanaged PAs, which would obviously lower the composite score. Nicaragua's unique situation of private ownership causes compatibility problems with the Management Effectiveness Tracking Tool (METT) making it difficult to compare Nicaragua's management effectiveness at the regional level.

[13] Zuniga, Livonia; Lineamientos para un Plan Financiero del SINAP (Primer Borrador), MARENA; 2004, unpublished draft report.

Barrier 4. Institutional Constraints in Management Capacity.

27. The most significant aspect to this barrier is that DGAP has no institutional presence in 50 of the 75 areas within the system leaving half of the PAs are in administrative abandonment. In the remaining areas, management planning and infrastructure exists thanks to donor-driven projects. Of that group, only one area, The Mombacho volcano (the original PA in the system) is completely sustainable. Of the other 24 areas with management aspect, a low management effectiveness was ranked by TNC/PROARCA project, who has tracked the effectiveness of 16 PAs receiving support from donor-driven projects, including 9 PAs under co-management arrangements, using a score-card approach similar to the METT (see baseline analysis). The table illustrates that, based on a 1000 point total, the overall score of 452 is barely in the "fair" range. (See also Section IV, Part XI for a list of 35 indicators analyzed).

Table 1: Level of Management Effectiveness for 16 PAs base year 2005

Scale: Satisfactory >800 Acceptable 601-800 Fair 401-600 Deficient 201-400 Completely Unacceptable <200	Social Management: 333
	Administrative Management: 607
	Natural Resources: 388
	Political/Legal: 339
	Economic-Financial: 540
	Total Management Score: 452

28. Although the scores do reflect some baseline success in the area of administrative management (elaboration of management plans, basic equipment, and training) all other categories are deficient. The next highest category, Economic-Financial actually mixes criteria, all of which do not contribute to the sustained ability to cover recurrent costs of management at a determined level, which is a critical expectation of the decentralized management paradigm. In addition, the indicators do not reflect the presence of a financial or accounting system, system audits, or financial expertise present within the PA. Only 5 PAs have business plans, although these are intended for a local audience and have been developed to that level, there are not adequate financial statements for the PAs to gauge their success nor provisions for the submission of an adequate financial statement to DGAP. Business planning and management planning are not linked between the site and system-level where information may be processed and analyzed to support decision-making. It is also worth noting that all of the PAs measured were receiving strong international participation during the 5 years of scoring. Therefore, strong scores in the Administrative and Economic categories are likely to change, now that the projects that support them have concluded.

29. DGAP's technical capacity is transitory. Technicians and professionals are hired and replaced in cycles with donor-driven projects. During the PDF-B phase, a separate TNC study on SINAP's financial gap estimates that personnel needs for a "Basic Management Scenario" at 690 people and 977 for an "Optimal" situation. At the moment there are only 225 persons devoted to all administration, management or investment projects, leaving a deficit of 66% and 77% respectively. Therefore, SINAP is being managed at just 33% of the basic level of capacity.[14] There is no reliable estimate of the percentage of those persons that have adequate infrastructure, equipment, or transportation to execute their functions. In all of MARENA there is only one economist, who operates as the controller for the organization,

[14] TNC, 2006. Financial Needs Plan for the Protected Areas National System, Nicaragua.

without the time or the authority to apply those skills towards solving SINAPs financial problems or in the development of financial mechanisms.

30. There has been no professional planning or financial management training to administrative personnel to support the overall management of the system. Training for staff is in-house and oriented to site-level aspects including marine turtle protection and management, control and conservation of natural resources, pesticide management, environmental legislation, environmental services, low impact harvest, fire control, and solid waste management, undertaken almost entirely in response to donor requirements for projects. Courses in administration and management of protected areas for technical personnel, park guards, property owners, organization, local institutions, municipalities, and regional governments were given under the Co-management project. There is no personnel record that demonstrates staff qualifications as assets or measure of the effectiveness of the training programs. An overall training plan for 2006-2010 was not completed by the end of 2006.

31. Most of the PAs do not have adequate conditions for visitation, research and management, and are not accessible. Only 16 out of a total of 76 areas have infrastructure for management and recreational activities, thus imposing limitations on the ability of local populations to develop sustainable economic alternatives to the exploitation of biodiversity. Isolation and absence of tourist infrastructure limits the potential for tourism development to generate alternative livelihoods for local populations and income for finance PA management (see table 21).

Barrier 5: Financial Constraints

32. MARENA, DGAP, and SINAP operate under severe financial constraints that limit their presence in PAs and ability to execute management duties per management category. MARENA's budget has steadily declined from U.S. $26.5 Million in 2002 to a projected $15 Million U.S. in 2007, a 42% reduction not adjusted for inflation. This reflects the shift in national funding priorities towards economic growth sectors (see Table 27 ; see also Section IV, Part XI for a summary of the MARENA and SINAP financing). MARENA, has maintained a low but constant funding level for DGAP (Chart 1, below) totalling 15% of DGAPs budget. Donor support supplied the remaining 85% of the funding to SINAP. Together these efforts cover only about 30% of the system's overall needs. Donations have been in steady decline since 2004 and reached a critical point at the end of 2006 with the closure of 5 large projects and a corresponding 10% counterpart funding (cash) supplied by the GoN. This implies a $2.4 Million U.S. reduction for 2007 (30%) from SINAP's already low 2006 budget, with additional reductions targeted for the first quarter of 2007

33. MARENA's budget includes a category entitled, "public investments." This is the national counterpart funding to international development projects. MARENA uses this to covers the minimum requirements of staff and operating expenses, usually in the PAs where projects occur and a percentage of the system-level personnel. When these projects close-out, the corresponding public investment is discontinued, rather than continued to support the recurrent costs of infrastructure and personnel established by the project. Therefore, the Nicaraguan government has traditionally co-financed donor-driven projects rather than seek donations to compliment their initiatives.

34. SINAP's current operational budget of $7,975,200 U.S. is distributed amongst administration, execution of their management plans (all programs), Goods and Services, and Others (Table 2). These funds are allocated geographically distributed regionally with 49% to the Pacific, 17% to the Central, and 34% to the Atlantic. Meanwhile, the Atlantic has over 70% of the total area under protection and the greatest biodiversity thus demonstrating problems in the targeting and allocation of resources based on biodiversity conservation needs. The area of greatest extension, BOSAWAS, has the lowest investment with 0.7% of the total budget. Of the investments in the Pacific, 46% are destined to the Masaya and Mombacho Volcanos co-managed by the Fundacion Cocibolca with the former being government lands. Funds are dedicated to basic activities/programmes prescribed in the management plans and investments in basic infrastructure, equipment, personnel, and transportation. The largest gap noticed is that the Southeast Biosphere Reserve does not have a management plan (although several of the PAs within the Reserve do). On the other hand, the BOSAWAS reserve has a management plan while the PAs that comprise it do not.

Chart 1: MARENA/DGAP Budget: Internal v. External Funding

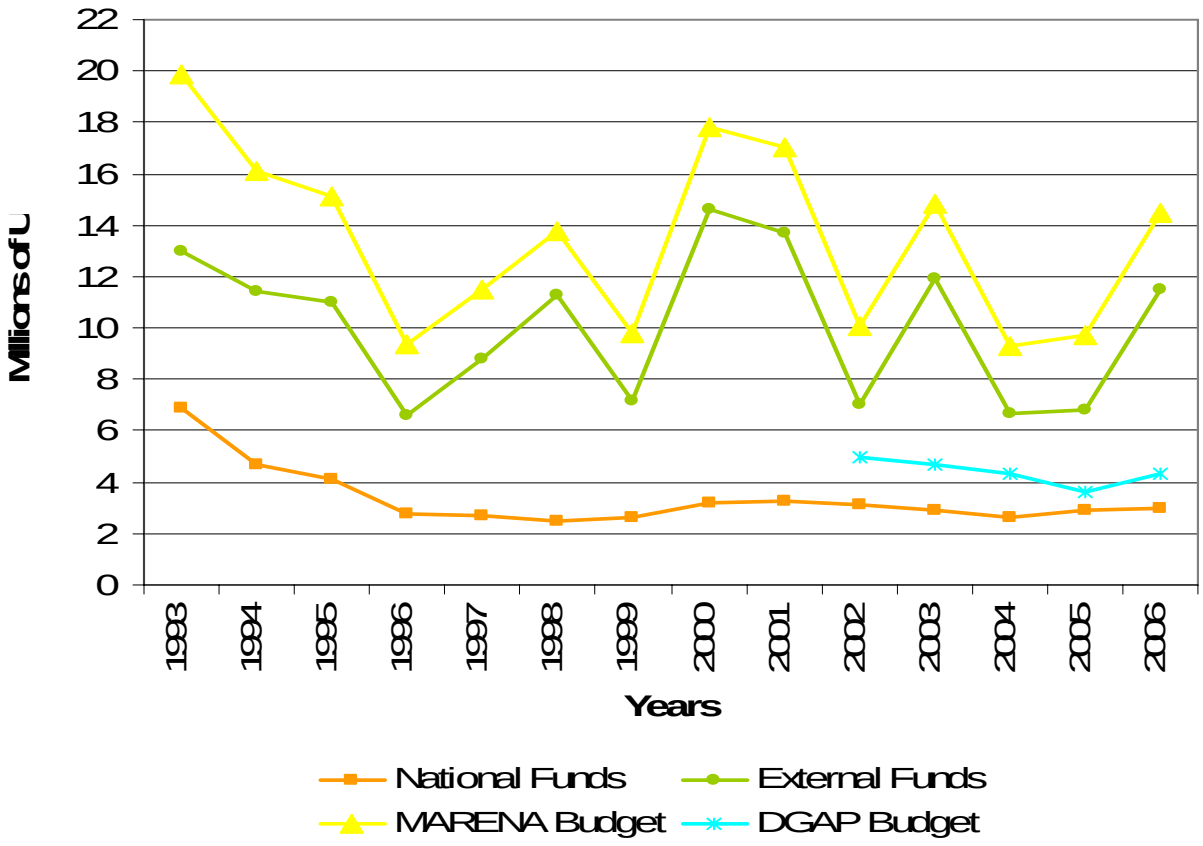


Table 2: SINAP Expenditures for 2006 ($U.S.)

Administrative Unit	Personnel	Management Plan	Goods	Others	TOTAL
Protected Areas	**521,769**	**1,378,861**	**2,039,455**	**1,311,378**	**5,251,463 (66%)**
BOSAWAS Biosphere reserve	104,406	78,000	1,032769	137,309	1,352,484 (17%)
Southwest Biosphere Reserve	72,652	0	1,194,229	60,321	1,327,202 (17%)
System-level (DGAP)	44,054	0	0	0	44,054 (0.5%)
Total	**742,881**	**1,456,861**	**4,266,453**	**1,509,008**	**7,931,194**

Source: TNC, 2006

35. The TNC financial gap analysis indicates that 17 protected areas of 76 currently receive adequate funds to match the needs of a basic scenario (administration, regulation and control, and participative planning). It is alarming to note that 43% of the PAs within SINAP do not receive any type of financial assistance nor do they implement any sort of programme. The additional amount required to achieve the basic scenario above the baseline funding for 2006 is more than double the present operations budget (Table 3). The optimum scenario, which would include additional investments in administration and management of natural resources, investigation, monitoring and evaluation, and sustainable financing, would require a budget greater than MARENA's. With 2007 reductions estimated of almost 20% for national funds, the system will be funded only to 20% of the basic scenario. The gap is only a rough estimate as the actual revenues to the system are not adequately accounted. In addition, much of the infrastructure is not accounted for nor are any other capital investments. Moreover, attempts by MARENA to quantify donor efforts resulted in serious obstacles.

Table 3: Financing Gap for 2 Scenarios

		Basic Scenario		Optimum Scenario	
Target	**Available**	**Gap**	**TOTAL**	**Gap**	**TOTAL**
Protected Areas	5,251,465	9,170,140	14,421,606	29,227,665	34,479,130
Biosphere Reserve: Bosawas	1,352,484	492,902	1,845,386	1,897,578	3,250,062
Biosphere Reserve: Southeast	1,327,202	761,093	2,088,296	2,723,286	4,050,488
System Level (DGAP)	44,054	358,274	402,328	358,274	402,328
Total SINAP	**7,975,207**	**10,782,409**	**18,757,616**	**34,206,801**	**42,182,008**

Source: TNC, 2006

36. As a result, Nicaragua has a low level of PA maintenance in comparison to their regional counterparts along the biological corridors. During the period of 2002 to 2005, investments in protected areas steadily declined from $2.20 U.S./Ha. of protected area to $1.60 U.S. /Ha[15] (Table 30). With the exception of El Salvador, which only has 1% of national territory under protected status, Nicaragua is now the nation with the lowest investment in protection per hectare in Central America. Even Guatemala, which is the second poorest country in the hemisphere, has a significantly greater investment in support of PAs. With such a small percentage of internally generated funding, neither MARENA nor DGAP are on pace to have sustainable funding strategies for protected areas in place by 2008, as agreed upon by the parties to the CBD in 2004.

37. MARENA's ability to create sustainable financing mechanisms is limited in part by the policy barriers. Together these lead to the deficiency of human capital, inadequate investments in infrastructure, and inadequate investments in administrative and financial systems. Inadequate financing also reduces funding available for capital investments, ultimately leading to lost revenue generating opportunities through investments or business opportunities in tourism, revolving credit funds, etc. thus creating an additional but significant opportunity cost.

38. There has been little planning for the sustainable financing of this rapidly increasing burden of protected land that amounts to almost 18% of the national territory. MARENA nor SINAP has personnel skilled in developing financial strategies or mechanisms, nor linkages or agreements with institutions who do. Financial planning and cost-effective management are not new concepts to SINAP but still do not form part of the organization's operational culture. Even in the Co-management project, where business plans were developed for 7 PAs, outside consultants were used to develop the documents, leaving many of the PA stakeholders weak in the planning process. The internal ability to develop new funding sources or to reduce the financial gap through cost effective practices is not instilled within the experience of the co-managers or the local committees that influence PA management. Those PAs are still deficient in basic tools, such as management plans. Even at the system level, the ability to develop emerging markets for environmental services, the technical knowledge to select and implement such mechanisms to improve PA financing is absent and will have to be developed in a practical sense from the ground-up.

Barrier 6: DGAP is not engaged with the economic development process within PAs

39. DGAP is not engaged with the main actors involved in the economic development process. Within this group there are two prime constituencies: the landowners and the institutions involved in implementing economic sector development strategies. Although private landowners claim 95% of the lands incorporated into SINAP, there is no systematic mode of communication between these actors. There is a plethora of municipal level committees with different configurations. These vary by region and by management category, with the Autonomous Regions having different social communication structures from those in the central and pacific regions. PAs under co-management have effectively established such mechanisms at the local level connecting them to the co-manager and the

[15] Cite Sandra Tijerino, UNDP-GEF PDF-B consultancy/study.

donors. None of these is effectively connected to DGAP to facilitate upstream or downstream communication, planning, dialogue, or conflict-resolution.

40. DGAP role in the planning of economic development initiatives is limited to providing assessments of impacts when infrastructure projects or economic development initiatives that will affect PAs are already in motion. This also effectively excludes the General Biodiversity Directorate and biodiversity outside of PAs. In spite of the PND statements to assure the health of the environment as part of the economic development process, the mechanisms and culture of coordinated planning do not exist. To compound matters, conservation objectives for many PAs are not established, so even if consulted, DGAP is working from a limited base with no means to adequately link the PA management plan, to municipal and agency development processes.

Institutional, Sector, and Policy Context

41. The Ministry of Environment and Natural Resources (MARENA) is the governing body for all national environmental management under Nicaragua's framework Environment Law (217) that further mandates the establishment of General Protected Areas Directorate (DGAP) which will execute the management and control of SINAP, MARENA is responsible for organizing the National Protected Areas System (SINAP) under the Executive Organization, Competency and Procedures Act (Law 290). DGAP is mandated with the normative functions (Management plans, park guards, infrastructure, project management, education, biodiversity monitoring within PAs, etc) while MARENA maintains regulatory functions (hearing and resolving disputes, application of administrative sanctions for infractions ,inter-agency agreements on concessions, etc.). Under MARENA, the General Directorate for Biodiversity and Natural Resources (DGBRN) is in charge of the conservation and sustainable use of the biodiversity outside of protected areas and is administratively separated from SINAP which is an institutional short-coming. MARENA is now working on unifying the two directorates into a common structure.

42. The three framework documents that form the baseline policy situation with respect to biodiversity, PAs, and SINAP are: the Nicaraguan Environmental Plan for 2001-2005; the National Biodiversity Strategy (2002); and the Development Strategy for the National Protected Areas System (2006). The Nicaraguan Environmental Plan 2001-2005[16] describes the priority actions for SINAP, the need to redefine the System both physically and conceptually, and incorporate other areas in the management of PAs. The National Biodiversity Strategy (2002) includes as an immediate objective the promotion of the economic viability of biodiversity considering its richness and economic value and the costs to the country of its degradation. It also considers various activities with respect to economic valuation of biological resources and payment for environmental goods and services as a mechanism to support conservation. The biodiversity strategy also recognizes SINAP as the cornerstone of *in situ* development and biodiversity conservation, demonstrating a conceptual linkage between the two directorates.

43. The DGAP in collaboration with the DGBRN recently formulated the Development Strategy for the National Protected Areas System, geared to modernizing the planning and

[16] Idem

management of Nicaragua's protected areas, strengthening local environmental management and promoting natural resource management and sustainable use schemes within protected areas. The strategy seeks to develop financial sustainability mechanisms to help reduce institutional dependence on external cooperation, at the same time promoting a larger commitment from the Government. The strategy, which was formulated with ample stakeholder input has the following objectives:

- Orient the planning and integrated management of SINAP to preserve, conserve, protect, and develop in a sustainable manner the incorporated areas assuring their incorporation into the national agenda based on recognition of their direct and indirect contribution to the national economy and development.
- Favour the participation and articulation of the different entities that interact within these areas.
- Promote the well-being within the populations within and around the PAs through sustainable and equitable use of natural resources.
- Diminish the negative impacts of the threats to the PAs within SINAP.

44. All framework documents incorporate the themes of multiple-use, sustainable-use, and valuation of ecosystems and services with notable mention of the local stakeholders. Given these objectives and the pro-growth national development policies, it is clear that DGAP is oriented to the multi-stakeholder nature of the system and to incorporating the needs of these into the framework.

45. The municipality is the basic unit of the country's political-administrative division (Law 40) and is organized and functions with citizen participation, the Municipal Council is the maximum normative authority of the local government and charges them with issuing municipal ordinances that define the management of their communities. There are several technical structures, such as the municipal environment commissions (CAM), the Municipal Environment Units (UAM) to lead the local environmental management process with citizen input. MARENA with WB and IDB support has supported the development of these as part of a decentralization process (see Baseline Analysis). These commissions are the established point of contact for citizens with the government (see Organizational Charts, Section IV, Part XIII) . Contact with DGAP through these structures is not systematic. In municipalities where PAs have been under a co-management arrangement with a third party (9 PAs), such as a local not-for-profit organization, the relationship between landowners, the municipal committees, and the DGAP has been facilitated through the formation of PA co-management sub-committees of the local CDM. However, this is not the case throughout the system.

46. These committees should connect to MARENA through a territorial delegate at the department level. MARENA manages a Sustainable Development Council comprised of the territorial delegates and other authorities from 15 departments and both autonomous regions. At this council, the territorial delegates of MARENA meet with representatives of the Municipal Environmental Units and with other authorities. DGAP should theoretically send a delegate to network with of the 17 department-level meetings, but does always do so for lack of personnel, causing a gap in communication between DGAP and the territorial delegates and in the social communication system between DGAP and the landowners.

47. Law 40 also contains competencies for municipal administration of environmental and natural resources and empowers the local government to issue ordinances on behalf of the environment that includes the establishment of Municipal Ecological Parks as a means of natural resource conservation. As part of the decentralization process, the municipalities are now receiving disbursements from the Central Government treasury to support their functions. Rates to municipalities derived from the use of natural resources under their jurisdiction, which includes natural resources within PAs, are also provided for by law 40. This has generated a growing interest for municipal governments to manage and profit from their own protected areas. Although there is no precedent, it is now also possible for Municipalities to participate as direct co-managers of PAs. Municipal governments participate during the preparation phase of management plans for PAs.

48. Nicaragua's has a distinct institutional setting for the Autonomous regions. Within the Caribbean region, almost half of the national territory, contains an ethnically and linguistically diverse population comprised of Spanish-speaking Mestizos, Miskitos, English-speaking Creoles, Sumu-Mayangnas, in addition to Garifunas and Ramas, which are smaller groups that have largely lost their original language. Law 28 establishes an autonomous regime for the Caribbean coast communities comprised of: the North Atlantic Autonomous Region (RAAN), based in the city of Bilwi (or Puerto Cabezas), and the South Atlantic Autonomous Region (RAAS), based in city of Bluefields.

49. All issues affecting *Indigenous Communities* and affairs at the national level are managed by the Presidential Secretariat for Atlantic Coast Affairs (SEPCA) which is responsible for Caribbean affairs from the central Government. Politically, The Atlantic Coast Autonomous Regions are governed by a Regional Council, CRAAN and CRAAS respectively, by a Regional Coordinator, with corresponding municipal structure and community authorities. One of the general attributes of the Regional Councils is the promotion of the rational use, enjoyment and pleasure of the waters, forests, communal lands and defence of the ecological system. The regional authorities are mandated to organize participatory entities to ensure that it will obtain greater involvement by the municipalities and civil society in identifying problems as well as measures for fulfilling this mandate and it must establish an entity to coordinate with MARENA. To this end, each autonomous region has an institution entitled the Secretariat For Natural Resources (SERENA).

50. The management of Biosphere Reserves is under the authority of 2 Biosphere Reserve Secretariats which are connected to MARENA in a parallel structure to DGAP, each comprised of PAs. Like DGAP, they have a budget assigned directly from MARENA, but also share the same reality of DGAP with an over-dependence on donations for the majority of the budget. The National Commissions for the Biosphere Reserves, BOSAWAS and Sureste (Southeast) Biosphere Reserves, were respectively created by Law 407 and Decree 66-99. These are another important element in the decision-making structures for management of protected areas. These commissions, composed of national, regional and local participants from governments and civil society, are the highest-level forum for policy decisions concerning management of these important protected spaces. Nevertheless, there is a perceived lack of leadership in developing these Reserves due to a disaggregated and un-coordinated agendas and lack of a common vision. The executive structures of these Commissions are de-concentrated entities, but they have low management capacity in terms

of resources and personnel. The BOSAWAS is now the target of capacity building under the GEF Corazon project.

51. The decentralization of authority to the regional authorities is a challenging process that impedes the full implementation of the SINAP Development Strategy. Constitutionally, these areas are a national patrimony, of international importance, and are under the auspices of international agreements. MARENA maintains its position as the focal point under all conventions in environmental matters. Therefore, the current political and legal framework creates multiple responsibilities, contradictions, and overlaps, especially between sector and municipal law, and legislation on indigenous rights (see Baseline Assessment). This project will play a role in working towards important policy improvements in this aspect.

52. Economic activities within PAs are managed within a multi-agency framework. MARENA is responsible for the environment while other agencies are responsible for assuring that the activities themselves are sustainable. MARENA regulates the use of renewable and non-renewable natural resources and assures their adequate use, monitoring and quality control. It is the responsibility of the Ministry of Finance, Industry and Commerce (MIFIC) within the context of the State Institutional Organisation Act (Law 290) to administer the commerce of state-owned natural resources such as mining, fisheries and aquaculture, forestry, hydro-electric energy, mining, and forestry thus ensuring compliance with the technical norms and regulations. Law 217 prohibits the exploration and exploitation of all natural resources in legally protected areas, which is interpreted as the "core" areas of the PAs as defined by the management plans. Hence, those activities deemed as "sustainable" are permissible within the buffer zones. The impacts of these activities depend on the strength or weaknesses of the management plans are, therefore, dependent upon the capacity of the DGAP to create, execute, and monitor these instruments and successfully negotiate with competing interests. The detainment of economic development activities is common for lack of a PA management plan or an individual management plan required of a private property owner. In this case there is pressure to expedite the production of the management plan to avoid delay of badly needed economic development.

53. Within executive decree 45-93, MARENA manages these activities through bi-lateral agreements with MIFIC and their agencies: (1) National Fish and Aquaculture Administration (ADPESCA); (2) National Geologic Resources Administration (ADGEO); (3) Water Administration Board (ADAGUAS); the Ministry of Agriculture and Forestry (MAGFOR) and their semi-autonomous National Forestry Institute (INAFOR), and the National Tourism Institute (INTUR). A list of current concessions within PAs is provided in "Concessions within PAs", Section IV, Part IX. The forestry concessions within PAs has not been adequately quantified, demonstrating a gap in coordination between DGAP and INAFOR. Under this agreement, MIFIC, MAGFOR, or INTUR charge concessionary fees for these activities. These are not shared with MARENA or with DGAP to support PAs, limiting DGAPs possibilities for sustainable financing adding to the financial barrier. In addition, MARENA maintains additional executive agreements with the Army and the National Police for enforcement within PAs (Baseline Assessment).

54. The legal and managerial framework for these agreements is open to challenge and requires further policy development. DGAP does not maintain an open robust level of communication with these agencies and is involved only when economic development

activities require a management plan or require official interpretation of the terms an existing management plan.

Stakeholder Analysis

55. There are four levels of stakeholders participating in the project: international, national-level institutions, local-level institutions and private sector concerns interacting within and influencing the management of PAs. These have participated in the design of the project and provisions have been made as part of the design of the project to include and assure their active participation and feedback during the implementation of the project. Section IV, Part IV presents a detailed description of the partners, their roles. Plans to maintain their participation on a sustainable basis are incorporated into the design of the project, and mechanisms to assure their active participation during project implementation. These are summarized by stakeholder group as follows:

56. At the *international level*, the bi-lateral and multinational cooperation agencies that are working in the geographic area of project intervention include: the World Bank (with CCAD in the *Corazon* project), DANIDA (PASMA II), the IDB (PRODEP), and USAID (Managers of the Millennium Challenge), which finance system level projects to improve aspects of SINAP and support to local PAs as described in the baseline analysis. UNDP is the implementing agency and a principal stakeholder that forms the linkage with international partners. These agencies are co-financiers, with the exception of the WB, who is not listed as a co-financier due to GEF rules for co-financing. The connection with the WB/Corazon role is further described in the IA linkages section. Linkages between the project managers of the mentioned projects is provided for in the Stakeholder Involvement Plan through regular meetings to coordinate project activities and exchange lessons learned. These agencies participated in the design of the workplan and logical framework during work sessions and direct consultations. The only exception was USAID. In this case, IDR, who executes the Millennium challenge participated in the design of the project as did representatives from the USAID sponsored COMAP project.

57. At the *national level*, The government agencies include MARENA and DGAP, who are described in the previous section. The project will be executed by MARENA, which will coordinate with the other institutions listed. The outgoing CBD Focal Point was involved in the design process and accompanied the entire PDF-B process. The new MARENA officials and CBD Focal Point, who is currently a member of the Biodiversity and Natural Resources Department of MARENA where the FSP have been briefed on the project by UNDP. The new officials will be involved in the development of the initiative during a subsequent round of PDF-B consultations described below. In addition, direct consultations with the Rural Development Institute (IDR), who executes the PRORURAL project (IDB) and the Millennium Challenge resulted in the development of output 2.2, which involves the integration of economic development models with PA management objectives. The Ministry for Agriculture and Forestry (MAGFOR) (please refer to Baseline Assessment for project descriptions) will participate as the prime entity for Geographic Analysis and in coordinating with groups of producers. Other international/national-level stakeholders also include one international NGO, TNC participated in generating information to support the design of the project, in the form of the financial gap analysis and has also participated in meetings in the

development of the workplan with COMAP project representatives. In addition, selected NGOs involved in the co-management of PAs were consulted locally on the design of the project. In addition to those mentioned, the following national government agencies participated in bi-lateral meetings to coordinate project output and will play the following roles:

- *National Forestry Institute* (INAFOR): INAFOR administers, regulates and controls forest management plans, including those in the protected areas. They will coordinate with forest users and in the development of concessions for SINAP.
- *Nicaraguan Tourism Institute* (INTUR): They will be a partner in studying the eco-tourism industry and in developing a proposal for long-term eco-tourism development. They have developed Strategic Planning Zones for Tourism (ZEPT), which cover protected areas within SINAP (Table 21).
- *Nicaraguan Institute of Territorial Studies* (INETER). The organization responsible for climatic, hydrologic, geographic, and other data. Their role within the project will be support to management planning, participative management of natural resources, and delineation of protected areas.
- *Ministry of Industry and Commerce* (MIFIC). Develop strategies and policies for sustainable economic development in Nicaragua. They will play a role in developing schemes for concessions in coordination with MARENA and INAFOR.

58. To strengthen participation at the local level and to resolve the issues of decentralized management, outcomes 1 and 2 of the project strategy were developed with stakeholder input from the *Autonomous Regions and local level actors*. To facilitate this process, a PDF-B consultancy to promote and elicit stakeholder input was implemented to facilitate communication with these actors in lieu of the current barriers to communication. These actors involved in this process include SERENA and the municipalities, Community Based Organizations and with local NGOs involved with PAs that were selected as samples from 7 of 15 departments as described in the Stakeholder Involvement Plan who participated and defined the following roles:

- *Council of Autonomous Regions of the Atlantic* (CRAAN y CRAAS): Their role is to coordinate with National Ministries and with SERENA the development of plans for the decentralized management framework of PAs and guide that process in the Atlantic. Representatives were interview during the National Council Meeting in December, 2006. SERENA (RAAS) was directly consulted on the aspects involving a structure for communication with the municipalities and PAs and their input is included in the proposal for a participatory and integrated stakeholder governance structure that led to the development of outputs 1.4 and 2.1.
- *Municipalities*: Representatives from Municipal Development Committees were consulted and were the main actors whose opinions led to the development of output 2.1, which is a system-level participatory governance/communication structure that will be engaged to network with producers that live within protected areas and connect these actors through the municipal-level structures to MARENA via territorial delegations (department-level). Although the design of the system is preliminary and subject to development under the FSP, the municipalities will be a foreseeable focal

point for upstream and downstream communication and networking with the multiple private sector actors within their jurisdictions.

- *NGOs and Private Sector concerns*: Both not-for-profit organizations and representatives of private sector were included in the consultations at the municipal level, including CBOs of landowners in the form of producers associations. An original plan for stakeholder communication with respect to PA management was, in a preliminary fashion, determined to be technically sound, but remains un-implemented due to financial reasons, indicating problems in feasibility that negatively influence sustainability. Based on this finding, the idea to reconstruct a formal structure for stakeholder participation through existing and functioning municipal-level committees and MARENA's territorial delegations was included in the project design, now in the form of Output 2.1. The communication process with the private landowners continues to be weak. For that reason, the PDF-B process, which is still open, will be implementing 7 additional validation workshops with local level actors and indigenous representatives by July 2007. This final round of consultations is designed to communicate adaptations in the project design based on reviews and to document perspectives on stakeholder participation for the inception phase of the project. To draw MARENA even closer to the private producers, the project has created actions to create experiences in adapting local production to conservation objectives (output 2.2). Through this series of actions, It is expected that private producers will have the structures and the tools necessary to assume their role and responsibility for communicating with MARENA on PA management issues that affect them and in orienting their productive activities to conservation objectives. The local NGOs (not-for-profits) that that co-manage PAs will have involvement were included in the consultations. Based on these and input from other stakeholders, an output was included in the project design that will better define the roles and responsibilities of NGOs in the co-management of PAs. These will facilitate the implementation of improved management systems in the PAs where they operate and form an important local coordination role with local stakeholders that is complementary to the municipalities.

59. In addition, the main stakeholders will communicate through a series of steering committees. The national steering committee will be constituted by MARENA, MAGFOR, IDR, INE, Banco Central, MHCP, MIFIC, INTA, and Universities. They will assure inter-institutional coordination and resource mobilization. In addition, Local PA management committees will be formed to represent the PAs in each Municipality to integrate the representatives of the public and private sector. These committees will be organized and made official by MARENA and will provide oversight, inter-sectoral communication, and coordination and local decision-making.

60. A national forum or council will be organized through a general assembly and an executive committee that will work as the liaison between the communities and the public. The specific functions include: Channelling demands from communities to SINAP, supporting field level studies, supporting channelling resources, and dissemination of lessons learned. See exhaustive list in the Stakeholder Participation Plan and additional Mechanisms to enhance participation (Section IV, Part IV).

Baseline Analysis

61. The DGAP and the NGO community have undertaken baseline activities in an attempt to convert SINAP into an effective vehicle for biodiversity conservation. These actions are generally implemented in the following context: (a) improving an enabling environment for management and financing; (b) improving management effectiveness; (c) increase in sustainable financing; and (4) developing greater awareness. These actions are important but have been ineffective due to the persistence of barriers described earlier. The projects listed in the following presentation provide a platform to launch the strategy for this FSP. Those qualifying as counterpart funding to this project are further described in the baseline analysis section of the Incremental Cost Assessment.

Improved Enabling Environment through Policy Development

62. The DGAP, with support of the Finnish-Nicaraguan Environment Programme (PANIF-APB), initiated the formulation of the Strategic Development Plan of the SINAP System in 2000. The objective of this strategy was to strengthen SINAP by developing public and institutional policies to achieve an optimally functioning Natural Protected Areas System. Although the project fell short of these reforms, the Nicaraguan government utilized the information to produce the SINAP Development Strategy.

63. The DGAP Strategy embraces a new approach for the planning, management and administration of protected areas, which includes strengthening of territorial management, as well as the promotion of sustainable use and exploitation schemes for natural resources existing in protected areas. The strategy seeks to balance the economic development plans of the government by seeking mechanisms for the involvement of producers in PA management. It also signals the need to develop mechanisms for the economic sustainability of protected areas that will, in the medium term, diminish the dependence on international co-operation. The strategy also embraces the decentralization process as critical to the development of SINAP and alludes to the cost and management effectiveness of achieving state administration (at central, regional and Municipal levels) of protected areas by complementing low public investments in PAs with increased promotion of private investments and interventions by co-managers, such as NGOs, communities, municipalities, or private groups of groups of private land owners with the willingness to manage these territories with stakeholder participation and in accordance to the societies and local cultures.

64. The strategy, developed through an extensive participatory process in the Pacific and Central regions, obviated the participation of the Autonomous Regional Authorities leaving an important and uncompleted step in grounding the document to the conditions and systems established in the Atlantic. As a framework document, the broad steps for the development of improved management, improved financing, and improved awareness are outlined. The document is weakened by its focus on activities, rather than broad objectives, targets, and indicators for conservation of biodiversity. The document does outline important short-term actions and is recognized as the overriding policy for the development of SINAP. The strategy has been used as a framework to coordinate efforts between the Environment Support Project (PASMA/DANIDA) and the development of this initiative. A summary chart of the objectives and results of the SINAP Development Strategy is included in Section IV, Part III)

65. At the national level, significant effort has been supported by the Finnish and Danish governments to catalyze the *decentralization process* between MARENA and SEPCA. These efforts culminated in initial negotiations and a framework document that was to form the basis for an agreement on the de-concentration of MARENA functions. The process is currently stalled due to political differences and by contradictions and overlaps between sector and municipal laws. Mediation and negotiation are required to bring the process back on track.

66. MARENA has made some progress in decentralizing functions to its territorial delegations. This has basically involved laying the foundation for the transfer of responsibilities and leaving all normative function at the central level, while at the same time, promoting local-level environmental administration and monitoring in the hands of the territorial delegations and municipal committees. An action plan for a *Decentralization Strategy of the Environmental Administration* to MARENA's own territorial delegations was formulated in 2004. To date, MARENA has decentralized several management functions,[17] drawn up 41 environmental administration instruments, and installed a territorial delegation in each Department and Autonomous Region to make the local services more accessible. Through several projects and WB support, it has also modernized 93 Municipal Environmental Plans, thus integrating more local actors into environmental management.[18]

67. The passage of the Municipal Transfers Act in 2003 increased the interest of the Municipalities to increase their exposure to PAs and to the sound management of resources. In addition, some have received considerable training and awareness-building of natural resources issues through several donor-driven initiatives, including investments in forming municipal environment units. These improvements, however, have not been uniform or complete with these units experiencing demonstrating capacity and equipment deficits. DGAP has not systematically utilized these structures as a cost-effective means to improve communication, planning, or participation, mostly due to budgetary deficits and insufficient attention being paid to establishing effective conduits for communication. Local committees for co-management exist as a sub-committee within the Municipal sustainable development committees. Within this forum, PA management issues have not been promoted and are perceived as a low priority in comparison to other Municipal development issues.

68. In the case of MIFIC, a decentralisation process towards municipalities on both the Atlantic and Pacific Coasts is underway regarding control over artisan fishing and mining. The first phase of the Danish Environment Support Project (PASMA) supported this process as well as the improvement of monitoring systems related to fishery resources. The follow-up PASMA II project will continue supporting MIFIC in its efforts to secure a more equal access to resources at the local level while simultaneously providing the basis for increased incomes among the municipalities based on natural resources. Dialogue between DGAP and MIFIC will be also be enhanced through this FSP.

69. In terms of enforcement, MARENA signed collaboration agreements with both the army and the national police, who have provided security and manpower. For example, in protected areas, such as La Flor or Chacocente, which are of special interest for the nesting

[17] 8 of these are related to protected area management, specially in issues such as the development of plans and methodologies for natural resources and biodiversity within protected areas and of financial sustainability mechanisms, as well as those related to forestry activities in the PAs.
[18] División General de Planificación, MARENA.

and birth of marine turtles, there is a permanent Army presence supporting surveillance activities. In the case of Biosphere Reserves, specific commissions exist that include the Army and Police together with the Mayor's office and Ministry of Government to provide quicker responses to eventualities such as land invasions and the flight of natural resources in both Reserves. These commissions have proven very effective in carrying out their work and are considered a model of the positive impacts of cross sector coordination. MARENA also supports the Army in capacity-building activities with respect to environmental issues. Outside of this and the co-management models, Law enforcement is constrained by insufficient personnel and budget to enable effective patrol of many remote PAs.

70. Within the scope of legislative support to improving PAs, a preliminary design of a Natural Resources Law on Tariffs, which would enable financial mechanisms for SINAP, has been outlined but is in need of revision and update. Also, there are numerous draft versions of a comprehensive Protected Areas Law that would provide more administrative visibility to SINAP, formalize the decentralization of PAs, and provide more opportunities for SINAP financing. This legislation package is in need of complete revision, updating, and commitment before the political process leading to approval can begin.

71. To facilitate the modernization of the administration and sustainable financing of PAs, Co-management agreements were promoted in 9 PAs with USAID support. Under this modality, each of the PAs is administered by a third party in a public-private partnership under a 10-15 year co-management agreement with a legally registered, not-for-profit organizations. The NGOs are fundamental to the mobilization of financial resources in support of the administration of the PAs and in generating support for PAs through advocacy. The current co-management portfolio includes 3 foundations, 4 local associations, and 1 university. This and other multi-lateral donor projects have improved management effectiveness at the site level. The most important advance in this area is the completion of site-level management plans and training to approximately 25 PAs and business planning for approximately 6 PAs. However, almost 50 PAs are in a state of total abandonment while gaps in management efficiency persist in the PAs that have received some assistance. In total, about 3 PAs have reached a high level of management efficiency.

72. This experience, however, does not necessarily lead to better management or long-term financial sustainability (see Barrier 4: Institutional constraints). Management scores were generally below a score of 400 on a scale of 1000, indicating deficiencies on almost all areas measured. The participating NGOs behaved like public service contractors, with 2 resigning shortly before the conclusion of the project. Others are presently requesting additional funding from DGAP for the management of their areas. This indicates that financial sustainability is only possible through organizations that have demonstrated their own internal financial stability. This also demonstrates that management efficiency is a long-term process and that support is necessary until PA business plans materialize into action. The organizations who resigned from the process have been replaced by local associations who would need to begin the process of training anew. There is speculation that future arrangements could involve municipalities, producers, or other groups.

73. Another principal lesson learned is that local associations require significant organizational strengthening to prepare them for the varied aspects of co-management. Co-management does not merely imply ceding administrative responsibilities. It also implies that the co-manager must not expect remuneration from DGAP as a sub-contractor, but rather

form part of the solution to the financing and other issues that confront the PA for which they need to be prepared. Additionally, the experience demonstrates that local co-managers can be protagonists in uniting the diverse interests of producers and residents. Long-term financial plans are absent in almost all of the co-managed areas. During the PDF-B phase, an analysis of 4 PAs (one of which is under the co-management arrangement) demonstrated that NGOs are only one stakeholder in a multi-stakeholder matrix. Where conflicts exist between a not-for-profit/issue-driven entity and private sector concerns, the dialogue breaks down. On the other hand, these arrangements have yielded important checks and balances in the nexus between PA management and the nation's economic development platform. An additional important lesson learnt is that methodology for the elaboration of management plans is standard but cost prohibitive for many of the small PAs. The requirements for management plans are being revised with stakeholder participation by IDR under the PRODEP project (See baseline activities/Incremental Cost Analysis for project descriptions).

Development of Sustainable Financing

74. Sustainable financing has been on the agenda of many large development projects aimed at improving PA management in Nicaragua. To date, several baseline activities have been undertaken, such as studying the potential for environmental service payments, but none have demonstrated effectiveness on any significant scale or at the system level. The most significant action has been the establishment of a fiduciary mechanism has been designed with World Bank support. The National Environment Fund was formally designed and constituted. Unfortunately, the fund was not adequately capitalized for lack of donor confidence and support. MARENA is committed to the creation of a fiduciary mechanism or fund that can ease the financing burden to SINAP. UNDP, with GEF funding, contributed to the Evaluation of Capacity Development Necessities, which in 2003 carried out a study on the Incentives for Conservation and Sustainable Use of the Nations Biodiversity. As part of its recommendations, this study stresses the importance of creating the institutional and legal bases which may guarantee the funding of conservation and biodiversity. Another study from the same year entitled, "Situation Analysis of Environmental Services in Nicaragua," indicates the lack of a clearly established legal definition of natural resources quotas and tariffs are the major barriers. The baseline assessments done by these studies formed the basis of this projects financing outcome and proposal for legislative reform as described in the project strategy and logframe.

75. The Law for Incentives for the *Nicaraguan Tourism Industry* creates incentives and benefits to anyone, foreign or national that invests in tourist activities as authorized by INTUR. This law created an immediate benefit attracting U.S. $229 Million to the economy. These investments cover tourist infrastructure and industry related equipment. The administration of these activities includes authorization by MARENA. In addition, tax credits and exemptions are available for authorized tourist activities within that are situated in Special Zones Planned for Tourism Development (ZEPDT). These zones fall within 6 prioritized tourism regions. INTUR recognizes 4 types of ZEPDT, one of which is related to nature tourism. INTUR may also authorize incentives for investments within PA categories such as, Historical Monuments, National Parks, other public sites of tourism and cultural interest, and in the restoration of private property for historic preservation in accordance with architectural and historic norms. These incentives range from $40,000 for national park investments to

$100,000 for historic private properties. Table 21 includes a listing of the ZEPDT for Natural/Ecologic development.

76. Several efforts are underway to promote tourism in the Autonomous Regions. A joint STEP (WTO)/ SGP (UNDP) initiative is working with the RAAN authorities and several local actors to (tentatively) implement a strengthened action plan in the Municipality of Puerto Cabeza, including many indigenous communities extending on to the Miskito Cays Biological Reserve. The CBA developed a sectoral study on tourism for both autonomous regions which looks at the challenges and outlines recommendations for the development of sustainable tourism. As a planning tool for decision makers it analyses the potential and challenges of tourism as a conservation tool in the RAAN/RAAS. A system-level analysis and targeted actions have yet to be developed. Neither INTUR nor MARENA has established mechanisms and procedures for guaranteeing sustainable tourism within each zone.

77. Baseline activities in public awareness are limited. The National Commission for Environmental Education (CNEA), regulated by MARENA, is responsible for developing a consultation process for environmental issues in close coordination with government and non-governmental organizations, the private sector and international development agencies. As part of this mandate, the CNEA implements Strategic Activity 6 of the National Biodiversity Strategy, which consists in education, promotion and social participation of the Nicaraguan society in biodiversity related matters. To generate a collective conscience about the sustainable management of biodiversity, CNEA aims to raise awareness and create capacities of politicians, private sector and civil society including students, community and indigenous organizations as well as farmers. However, raising awareness on the importance and significance of protected areas among decision makers has been limited and sporadic. A systematic approach to obtain the support of politicians for the natural protected areas is required to raise this awareness among decision-makers, especially to close the financial gap.

78. The Trans-border Biosphere Reserve project *"Heart of the Meso-American Biological Corridor" (RBT-CCBM)* is comprised of 6 components: (i) Political Consolidation and administration of the "Corazon" of the Meso-American Corridor; (ii) Strengthening of the National Protected Areas System; (iii) Participative implementation of management plans; (iv) Participative natural resources management; (v) Monitoring and management of information; (vi) Administration. With counterpart funding from MARENA and CCAD, the 6 year project will total $6,338,640.00 U.S. The project is oriented to contribute to resolving land tenancy problems within the BOSAWAS Biosphere Reserve with special emphasis on indigenous territories for the defence of ancestral homelands with emphasis on ancestral rights. The project will capitalize financial mechanisms for the operation of SINAP working with the PASMA (discussed below) project, while this project will establish the apparatus and mechanisms at the system level. Specifically, the Corazon project will capitalize the National Environment Fund with $500,000 U.S. (described below). The Corazon project will establish annual meetings between indigenous organizations and the SINAP fund, in addition to incorporating the eligible indigenous and ladino communities and organizations in the implementation of management plans. These entities will also design and implement subprojects for natural resources management that respond to their priorities and needs, supporting a minimum of 20% co-financing. In addition, the Corazon project will develop a social monitoring and information system for the BOSAWAS biosphere reserve (a SINAP node) linked to the national system.

79. The Corazon project will not be considered as counterpart funding per GEF regulations. This PDF-B staff has coordinated it's activities with the interim staff responsible for the inception phase of the Corazon project, who is currently in the process of confirming their work plan. Ongoing coordination with the Corazon project is described in the IA Linkages Section of this document. The Corazon project will work predominantly in the Atlantic Region, specifically in the BOSAWAS Biosphere Reserve. This project has been designed in coordination with DGAP to avoid overlap with the Corazon project by working at the system level and focusing on 4 model PAs in the Pacific and Central Regions as described in the project strategy. The actions should be complimentary as this project will strengthen national policies, management, and support sustainable financing of SINAP.

PART II: STRATEGY

Project Rationale and Policy Conformity

80. The current baseline efforts are not sufficient to reduce the threats to biodiversity within PAs, leading to increased fragmentation of ecosystems, habitat decline, and eventually loss of species diversity. Most donor efforts have focused on site level activities to circumvent the systemic weaknesses of SINAP´s management capacity. However, this has failed to bring sustained improvements to the system and SINAP remains weak both technically and financially, even though a few prime PAs have benefited from intensive resource support. Furthermore, past efforts have not had a broad-scale impact on privately owned land within the PAs. The current situation is hence unsustainable and does not afford adequate protection for biodiversity:

81. A GEF alternative is needed to improve system-level and site-level organization, management, and financing of SINAP. The GEF alternative will improve the SINAP Development Strategy and help put in place enabling policies, and improved capacities and tools that will lead to enhanced representation of ecosystems and better protection for biodiversity through improved organization, management, and financing of SINAP.

82. By strengthening the National Protected Areas System, the project conforms to GEF Biodiversity Strategic Priority 1: *Catalyze sustainability of protected areas within the context of national systems.* As specific investments from the project will take place in model PAs that are spread across PAs in semi-arid areas, in forests, in mountainous areas and in coastal and freshwater systems, the project will support global environmental benefits as described in GEF Operational Programmes 1-4. The ecosystem planning approach as also contributes to OP-12. The focus on improving sustainable livelihoods while reducing land degradation processes such as deforestation and soil erosion corresponds indirectly to OP-15.

Project Strategy

83. SINAP faces a difficult situation in Nicaragua with numerous substantial systemic barriers to be overcome to achieve effective PA management. Therefore this project has been designed as part of an overall strategic package of international interventions which have already started and will continue into the foreseeable future to overcome Nicaragua's barriers. This project builds on on-going conservation initiatives in Nicaragua, particularly PASMA and the Millennium Challenge, through IDR (see Baseline Analysis). The project will focus on tackling the most critical barriers to strategic management and financing that limit SINAP's effectiveness as the cornerstone of in-situ biodiversity conservation. Once overcome, these actions will facilitate future efforts to resolve remaining barriers. Taking these efforts into account and prioritizing Nicaragua's current needs, the project approach has been designed to:

- Improve the national enabling environment so that the legal, policy and strategic frameworks are in place to allow SINAP to function more effectively. This will include key legal reforms and adoption of an updated master strategy for SINAP detailing its process for decentralization, coverage and management. Reforms will also improve financing possibilities and create incentives (and reduce disincentives)

for private producers within PAs to develop production in harmony with biodiversity conservation.

- Share the responsibilities of PA management across all relevant stakeholders including Ministries, regional government bodies, municipalities, private landowners and concessionaires and NGO co-managers. The project will support establishing and strengthening multi-stakeholder institutional structures so that they are operational and have capacity to engage stakeholders in PA management. This component will also develop the capacities of stakeholders, primarily landowners within PAs, to work with the PA authorities on biodiversity friendly economic activities.
- Improve SINAP's financial situation through transforming its financing system to generate, retain and account for funds and more effectively invest them at the site level.
- Institutionalize the learning within the project and MARENA for broader uptake, sustainability and replication.

84. The project will have a two-tier approach involving project interventions at the system-level and at the site-level. The system level interventions are those that will establish an enabling environment. These will involve the development of legislation and policies that will response to political and financial barriers and address the issue of de-centralization. The system-level mechanics involve the development of a re-defined, distributed, and conceptualized SINAP along with a system level management plan and financial plan. These will effectively update the SINAP development strategy. Input to the system level interventions will be provided through the development of governance or participatory structure that will enhance communication both upstream and downstream.

85. The second-tier comprises site-level interventions in PAs. These include installing and testing the site level components to financial and management systems, implementing model projects, and developing payment systems for concessions and revenue tracking. These interventions have been mapped by PA and can be found in Table 31.

86. The Environment Support Project (DANIDA/MARENA)PASMA project will be the principal counterpart to the GEF initiative. This project has three core areas of intervention. This project matches their strategic area #2, which will work extensively on in the areas of decentralization, geographic re-distribution of PAs in SINAP, valuation of resources, and work with the management information system. Specific interventions are described herein along with descriptions of the outputs. See the Incremental Cost Assessment for a brief project description.

87. The project will partner with the U.S. Millennium Challenge Account's Rural Business Development Project to support environmentally sound productive investments in PAs. The national partner, the Rural Development Institute (IDR), is managing the account with an ongoing WB productive development initiative (PRODEP). This project is working on land tenure, delineating PA boundaries through their land tenure initiative, and are providing support to businesses. Finally, the project will receive counterpart support and funding from TNC in management aspects. Other partners are described in the Incremental Cost Assessment.

Project Goal, objectives, outcomes and outputs

88. The project goal is, *"Nicaraguan society conserves biodiversity in-situ through a sustainable National Protected Areas System* This is based on the goal of SINAP's Development Strategy and responds to the nexus between Nicaragua's large constituency of private property owners and their need for economic growth that must be balanced with the need for conservation of biodiversity. The project objective is, *"The Nicaraguan Protected Areas System is effectively managed through legal reforms, strengthened institutions, sustainable financing and partnerships."* The objective will be achieved through the realisation of 4 outcomes that have been developed through a participatory process involving both stakeholders and co-financiers

89. A logical framework matrix is included in the executive summary, annex B with impact indicators. A workplan with outputs and indicative activities are presented in Table 7. Output indicators will be agreed upon in a project inception workshop with all counterparts. Activities will be coordinated in a yearly workshop and presented in an Annual Work Plan. See also Project Monitoring and Evaluation Plan.

Outcomes and outputs

Outcome 1: Enhanced Policy and legal framework enables improved SINAP management and finances. (GEF: U.S. $630,700, Co-Financing U.S.$330,000).

90. Outcome 1 reforms SINAP administration, management and finance by overcoming policy and legal barriers Policy will be developed to legalize the SINAP system, facilitate the decentralization/de-concentration of responsibilities for bio-diversity protection between the central Government and the regional autonomous governments, and to enable sustainable financing. To enable buy-in into the legislative process and to increase national financing of SINAP, the project will assist policy-makers to develop a new attitude towards the Protected Areas System and recognition of the economic value of PAs. Specific sectors such as forestry and agriculture will also be targeted to demonstrate that PAs do not need to impede economic development. Finally the outcome will support the SINAP strategy which will allow implementation of the decentralization process, new management systems and improved ecological coverage of PAs.

91. *Output 1.1. The quantitative economic contribution of Nicaragua's protected areas to the national and regional economy is widely known* The values of economic activities, environmental services, and biological resources will be updated with valuation exercises taking place within the Pacific, Central and RAAS regions. The PASMA II project will complete a study within a projected 19 PAs. This may also be implemented in the RAAN in areas outside the BOSAWAS Biosphere Reserve with the aim of approximating the overall value of the system to the national economy. Congressmen, regional autonomous governments, ministries holding concessions, and municipal level stakeholders will be targeted through consciousness raising activities, materials in Spanish and in local languages, mass media activities, visits to PAs for key legislators and a video on the value of PAs are key activities that will provide DGAP with the tools needed to demonstrate to the various ministries and autonomous regions the gap between the present declining investment situation and the value of the protected areas. This output will enable the passage of legislation and increased government financing outputs.

92. *Output 1.2: Legislation is in place to formalize the agreements SINAP management*. This will create a new Protected Areas Law to make official the negotiated roles and responsibilities for a re-designed and re-distributed organic structure, management, and administration of SINAP, and provide greater visibility for SINAP to decision-makers and in the national budget.

93. *Output 1.3: Legislation in force to enable increased revenues to SINAP and PAs.* Legislation is necessary to enable MARENA/DGAP/SINAP to receive revenues from tariffs charged for concessions, environmental service payments, fees, fines, etc. Existing draft legislation of a Natural Resource Tariffs Act requires re-framing and updating to include better pricing structures and to formalize the array of existing bi-lateral agreements on concessions. GEF will finance the political process including the revision and updating of the current draft legislation, lobby, and public consultations. Technical assistance in the evaluation of the pricing structures for the legislative proposal may also be provided.

94. *Output 1.4: SINAP has an improved strategic and management framework.* The strategy will provide the agreements for the de-centralization and/or de-concentration of MARENA functions within the context of SINAP management by defining, through negotiated agreement, the roles and responsibilities between MARENA, municipalities, the autonomous governments, and stakeholder groups for SINAP and PA management and adherence to the major conventions, such as the CBD. It will also complement PASMA II's effort to validate of the PA boundaries to ensure optimal ecological coverage and will include a prioritization activity to guide PAs for management investment based on biological value and management needs. In order to improve management, the strategy will include an analysis and proposal for an improved administrative structure for the Pacific and the Central regions, based in part on lessons learnt from the Autonomous Regions that effectively manages groups of PAs. The agreed upon framework will create a greater institutional presence and stakeholder contact. The Strategic Framework and Management Plan will build off of the existing National Biodiversity Strategy and will effectively update the existing SINAP Development Strategy.

Outcome 2: PA management responsibilities are shared by key stakeholders. (GEF: $378,600 USD, Co-Financing U.S. $3,000,000).

95. Outcome 2 will seek to mitigate the effects of economic development activities within PAs by assisting DGAP and stakeholders to re-define their roles in PA management and in the responsibility to mitigate the impacts of the economic development process on PAs. Partnerships will be fostered between DGAP, the landowners, and the various drivers behind the economic development process to coordinate an economic development path within PAs that is consistent with landscape values. To do so, the linkage between these actors will be enhanced through the creation of an integrated governance or communication structure and mechanisms in place to coordinate, monitor, and evaluate the impacts of productive activities occurring within PAs. This outcome will generate experiences for DGAP in working with stakeholders in establishing an integrated approach to the conversion of existing economically productive activities to improved systems that are more in-line with PA conservation objectives. This will take place in 11 model PAs selected for their economic activities and potential to produce the greatest range of lessons learned. Furthermore, integration with third-party co-managers will increase through a more formal institutional arrangement with objectively verifiable indicators. Together, these interventions will strengthen DGAPs

partnerships in orienting multiple stakeholders in the economic development process towards the needs of biodiversity conservation, thereby responding to both Nicaragua's international commitments and to the nation's economic development plans.

96. *Output 2.1: A participatory and integrated stakeholder governance and communication structure is functioning.* This output will create conduits to link numerous existing participative but unconnected groups and committees at the local level to the DGAP national-level administrative structure. This output will increase the representation and participation of currently un-represented local producers within PAs. Once improvements in upstream and downstream communication are established, input from all levels can be sought for the SINAP re-design process. The project will establish this through strengthening the role of the Municipal Environmental Councils (CMA) as the focal point for the citizens of the municipality that live within PAs. Technical assistance and training will be provided to increase the importance of PAs in the municipal agenda, establish a representative system of communication between the council and landowners, and capacity building to increase their knowledge of conservation objectives and management and business planning of PAs. Their role in the management will create economies for DGAP in reaching the public as many of the municipal councils have multiple PAs under their jurisdiction. With an expanded role, these councils will also serve as a representative in the evaluation and management of incentives as part of the economic development process, described in output 2.2, below. The project will then work to effectively connect these to the department-level territorial delegations[19] through increased involvement of both levels by providing them with a greater and better defined role in the annual PA planning process and in monitoring and evaluation of the effectiveness of PA management. This would complete the linkage with the DGAP who is already connected to these structures. These increased roles of the CMA and of the intermediate territorial delegations will be included in the SINAP financing strategy and plan.

97. *Output 2.2: Integrated stakeholder support for mitigating the impacts of economic development and integrating economic development with PA management objectives. the conversion of production systems to models of environmentally sound production in line with conservation objectives established.* This output will engage both the DGAP and the landowners as protagonists for biodiversity conservation. This role as been traditionally left to market forces and unilaterally defined by a given productive sector.. In this setting, DGAP and the landowners will become more involved and converge with IDR, MIFIC (and their agencies) and INTUR. This will be done through systematic support to landowners in the conversion of activities to biodiversity friendly land uses or practices, in the promotion of non-extractive investments, and in the establishment of monitoring and evaluation criteria to better engage the municipalities and territorial delegations (see above) in coordinating programmes and incentives and in monitoring the process. This would both strengthen MARENAs role as a regulatory agency, and add a further level of legitimacy and duty to the existing but underutilized structures. The production modalities are:

(i) Working with producers with existing economic activities within PAs for the "conversion" of existing systems agricultural production systems to agro-forestry systems in 7 PAs. (Cerro Musún, Kilambé, Tisey-Estanzuela, Tomabú, Quiabuc, Datanli/El Diablo, and Cosigüina) and the promotion of improved fishing practices (Estero Real and Isla Juan Venado). As a

[19] There are 17, one in each of 15 Departments and in each of 2 Autonomous Regions.

complement, a certification process is contemplated to increase the value of products produced in 5 PAs (Kilambé, Tisey-Estanzuela, Tomabú, Quiabuc, and Tisma). In addition, 2 model sustainable forestry projects will take place in Tisma and Mombacho. In the implementation of these models, DGAP will work directly with the executing agency, IDR, of the Millennium Challenge Account who will execute these activities. DGAP will work as a partner in the establishment of protocols, criteria, and in the definition and monitoring of the effects on biodiversity conservation.

(ii) Building capacity of local eco-tourism ventures. MARENA, DGAP, and INTUR will develop linkages and plans to support local business development for ecotourism. To accomplish this output, a strategy for ecotourism development within PAs will be developed between INTUR and MARENA with specific PAs targeted for primary investments and others for secondary investments.

98. In working with IDR and INTUR, and MIFIC, the MARENA/DGAP will take a position as an associate in the economic development process and will work from within these partnerships to mitigate the effects of the *status quo* economic activities within PAs. The relationship and involvement of the CMA and the territorial delegations will provide for the cross-fertilization of lessons learned and will provide a model that, given the lessons learned, could be upscaled through the same agencies and through the structure created in output 2.1.

99. *Output 2.3: Protocols, standards, and indicators for co-manager performance established.* To formalize the co-management experience and to provide for managerial tracking, the project will update the performance indicators for Co- management efficiency and establish protocols for co-manager performance based on these objectively verifiable indicators, including financial performance and accounting per outcome 3. These concepts will be developed for each management category for the new SINAP system and validated through agreements with existing third-party co-managers. This will effectively establish the rules for future co-management and will also provide a valuable tool in assessing the qualifications of co-managers prior to agreements. The performance of co-managers would then be defined and evaluated in relation to these indicators and communicated to the municipal committees and the territorial delegations. With standards, protocols, and targets for management efficiency developed, the regular and objective monitoring and auditing of the co-management experience can be undertaken with respect to specific to pre-determined functions that would be articulated in the co-management agreements, thus effectively institutionalizing the process.

Outcome 3: Capacities for Sustainable Financing of SINAP and PAs developed. (GEF: U.S. $406,700, Co-Financing U.S. $110,000).

100. The closure of the huge financial gap confronting DGAP will be a long-term process. Public funding is scarce and SINAP will need to take measures to cover costs. Outcome 3 provides the foundation for this process by establishing the long-term approach to sustainable financing and by taking actions towards creating an initial revenue stream. Actions to support the capacity for sustainable financing including the creation and formalization of a system-wide financial strategy that will outline the path, potential revenues, mechanisms, and partnerships needed for long-range revenue generation. Much needed and improved financial information will be generated through the establishment of a transparent accounting system and better business planning. Initial steps will be taken to create revenues from concessions

for existing activities already permitted in PAs but which do not currently provide benefits to the PAs. In addition, actions to increase the commitment of GoN to SINAP will be undertaken following awareness generating campaigns.

101. *Output 3.1 A long-range financing strategy and plan for SINAP in force*. The financing strategy will provide a comprehensive and analytical approach to reducing the enormous financing gap that plagues DGAP and MARENA and, in addition, to gradually reduce the dependency on foreign donations. The strategy will prioritize short, mid, and long-term actions to enhance the distribution of scarce resources, provide measures for cost effectiveness, and provide a plan for generating revenues to support PA management functions for the various categories of PAs. To develop the strategy, a committee or task force will be set up, comprised of public and private experts selected for their financial expertise. The task force would also be a forum to enhance communication especially between stakeholders that manage concessions within PAs. To facilitate the development of the strategy, the existing financial gap analysis will be updated with improved financial information. Financial mechanisms will be identified and analyzed for their revenue potential, including a national endowment, known as the National Environment Fund whose situation needs to be clarified. The fund is established but not capitalized for lack of donor confidence. A capitalization of U.S. $500,000 was expected from the WB Corazon project but is now in question. There are alternative options, such as the creation of a third-party mechanism (probably an NGO) that could later function as the satellite account linked to the Natural Resources Endowment. These options would be fully explored with WB/Corazon input in addition to other donors who originally pledged support for the fund. Although the strategy will help reduce the donor dependency of SINAP, donor nations will continue to be involved in the process over the mid-term. Full use will be made of Nicaragua's existing donor round-table and contacts in the development of the strategy and in rallying commitments to support targeted investments that comprise the financing plan.

102. To support MARENA in this the process, GEF will provide technical assistance in developing the financial strategy and providing both MARENA and DGAP with both interpretive and technical support in financial matters and in fund-raising. The in-house capacity for financial projection and planning will be strengthened. This capacity would be further developed with training, information products, and technical support to PAs in revising their site level business plans.

103. *Output 3.2: Increased annual government financing for SINAP:* This output will seek to reduce the financing gap by increasing government funding to support SINAP. The political process and awareness in Outcome 1 will be combined with a strong lobby effort and a public information campaign during key budget negotiation periods. Those efforts, in combination with more complete information from 3.1, will create the conditions needed to successfully leverage additional financing from important sectors (Ministry of Finance) and national decision-makers (members of congress and key committee members) to increase the baseline funding of SINAP. The specific targets are under negotiation and will be included in the logical framework for CEO endorsement.

104. *Output 3.3: Concession payment mechanisms established and functioning* This output will develop regulations that will increase revenues afforded to DGAP for PA and system-level maintenance derived from concessions paid in exchange for use and harvest of natural resources within PAs. This will ensure both the adequate pricing of concessions to

minimize their impacts[20] (currently not included in the pricing structure) but also to add and/or maximize revenues to SINAP's annual budget and create capital to continue the development of incentives for landowners to convert to cleaner production methodologies. For example, the shrimp producers in Estero Padre Ramos are prepared to participate in payment of concessions for their product. GEF will assist in the establishment of an initial transparent mechanism to handle the revenues generated by concessions and convert them into re-investments in on-the-ground actions in PAs. A current bi-lateral agreement with the shrimp producers has not generated any payments solely for the lack of an agreed-upon mechanism to handle the transaction. It will also ensure concessionaires finance costs to minimize negative impacts in the PAs. This initial model will create the capacity to negotiate future concessions with other sectors, such as: forestry concessions (Pilas el Hoyo), water-based services (Datanli/El Diablo), and Geo-thermal energy (Dipilto/Jalapa). The issue of concessions will be negotiated in coordination with the financial task force seeking short to mid-term solutions to the SINAP financial gap. This experience will provide inputs into the tariffs established in the Law on Natural Resources Tariffs that will formalize payments, compensation, and incentives for producers.

105. *Output 3.4: Model PA site business plans developed and implemented.* This output will provide improved and consolidated management and business planning at the site level, within the 4 pilot areas mentioned in the preceding output. Three of these areas currently have management plans and 1 has a business plan. These plans were done by consultants with little stakeholder participation or learning, thereby leaving the principal stakeholders without the capacities to act on them. These plans will be updated or completed through a consolidated and participatory approach with training targeted towards multi-stakeholder co-management committees. This experience will allow SINAP management to gauge the level of understanding and performance at the local level and will also determine the future investments needed in terms of training and/or technical assistance needed to develop adequate PA financial planning throughout the system.

106. *Output 3.5*: *A cost and revenue accounting system for SINAP is implemented the system level.* A transparent and accurate cost and revenue accounting system will remedy the chronic absence of financial information and facilitate business planning and cost effective management. This system will provide managerial accounting and information at the system-level and will record all investments, including those currently not recognized within the system, thus distorting the cost of PA management within the co-managed PAs. The development of the system will involve the both system and site-level components and will be tested within in the four pilot PAs mentioned in output 3.3.

Outcome 4: Institutionalizing management and learning within project and MARENA (GEF: U.S. $384,000, Co-Financing U.S. $380,000 U.S.).

107. Output 4.1: *Effective project management.* This will ensure effective project implementation through the installation of the Project Management Unit (PMU), which will be based at MARENA premises, and be integrated in the DGAP, thus ensuring close coordination between the project and SINAP management. Using results generated under the previous outcomes, the PMU staff will deliver effective and cost-efficient project

[20] These are not included in any pricing structure.

management. It will also contribute to strengthening the DGAP technical capacity for the duration of the project and the aim is for specific positions to be absorbed by the institution at the end of the project. Using inputs generated under the preceding outcomes, the PMU staff will deliver effective and cost-efficient project management. The PMU will also contribute to strengthening the DGAP technical capacity.

108. Output 4.2 *Project monitoring and evaluation system*. Effective and adaptive management will ensure effective implementation of the GEF project and better results as the project improves over time incorporating adaptations based on lessons learnt. It is hoped that the management of the GEF FSP would also be an example of how to employ the management systems developed in an adaptive process. The evaluation process will seek proposals at the mid-term and at the end of the project with sufficient lead time to permit the incorporation of lessons into the project design and allow for new proposals to be developed by stakeholders for continued improvements to the SINAP system and the continued development of financial mechanisms. The cost efficiency of project management will be determined by audits and will also serve to test the financial systems being developed by the project. Adaptations to project management will be proposed following evaluations and will be implemented within 3 months of the time of evaluations, rather than waiting for the next work plan. The experience generated from the model PAs and from the legislative and financial components will be systematized with the PASMA II and PRODEP experiences. Seminars are also considered (See Replication).

Project indicators, risks and assumptions

109. There are 3 impact indicators that are presented in the logical framework. The first is the number of PAs and Ha. with improved conservation management. This will be determined by a change in the METT score for the system and in the number of Ha. of the 4 targeted PAs for site-level management interventions will reflect the success in this area (excluding BOSAWAS, which will be counted within the GEF/WB Corazon project. A second is the number of PAs with management scores above 600. This will also indicate the success of the combination of management interventions. Only one PA to date has achieved this, in spite large investments by the COMAP project. This will indicate the improvements at the site-level by this project. The third indicator is the reduction in the financing gap for the baseline scenario. Although this is a long-term endeavour and given the considerable size of Nicaragua's financing gap, a large percentage in closure of this gap is not realistic in only 3-4 years. However, the indicator will keep all stakeholders in this and in future projects focused on the task at hand. During the design of the updated SINAP strategy, this indicator will also be considered as a formal measure of internal performance.

110. The indicators for *Outcome 1* are the agreements and passage of the legislation signed and ratified. The passage of this legislation would also indicate a higher degree of awareness of the importance of SINAP. Additional indicators of awareness, such as the number of decision-makers who identify with the system or that demonstrate levels of awareness would be surveyed as output indicators for which funding has been included in the budget. Special agreements will also indicate policies and legal framework have been created. In the first place, agreements for the resolution of the issue of de-concentration of functions with the autonomous region are critical to the long term policy framework. Agreements to fund the

financing plan will indicate that the framework strategy has been complete and that the financing plan has been both developed and negotiated. These agreements from multiple stakeholders will indicate that the framework actions are operational.

111. *Outcome 2* improves stakeholder participation at several levels. The first indicator will be the increase in the number of municipalities with a functioning participatory governance structure. "Functioning" will be defined as a regular stream of communication and information, such as an annual work plan, from each PA, through the Municipal Environment Council. This would also indicate that a conduit has been established between the private land owner, through the municipality, and upwards to MARENA. A second indicator is the number of new contracts or agreements signed with co-managers. A new contract that specifies performance indicators will indicate that the process is both complete and formal, providing the basis for performance monitoring. Finally, the relationship and integration of DGAP with counterparts involved in the economic development process that is ongoing in PAs will be indicated by the number of projects that are coordinated with impacts evaluated to mitigate existing practices. The baseline and targets include the number of interventions expected by sector.

112. *Outcome 3* creates the enabling environment for generating future revenues to the system and future financial management. The prime indicator is the increase in public investment by the Nicaraguan government to support the system over the baseline level at the start of the project. The amount of transfers from GoN will indicate the effectiveness of lobby efforts and consciousness raising campaigns. This figure will be readjusted to the investment figure at the end of the first semester of 2007. which appears to be quite a but lower that fourth quarter 2006 investments. This will also indicate the effectiveness of awareness building and lobby. The amount of the target is under negotiation and will be included in the logical framework by CEO endorsement. The financing of capital investments, likewise, will use the target of double the amount of investment in capital that could generate income, such as ecotourism, or in other revenue generating schemes. The establishment and transfer of money through accounts to manage transfers from concessions will indicate that the financial system to handle these is functioning. The amounts transferred will indicate the success of bi-lateral agreements to support SINAP through the transfers. This later point will also be indicated by the signed agreements, but more emphasis will be placed on the amounts transferred as the true indicator of success. An additional indicator will be the increase in the performance of the system as measured by the UNDP financial scorecard, which will be updated twice during the project.

113. *Outcome 4* assures adequate project management, monitoring and evaluation, and dissemination and response to feedback. The indicators of success will be the successful establishment of the projects financial system that will track budget execution. and finally, the number of events and/or interventions to regional counterparts of the lessons learned.

Project Assumptions and Risk Assessment

114. The logical framework presents assumptions at the outcome level. There is moderate foreseeable risk to the achievement of positive impacts if the pertinent assumptions should not hold true. These are illustrated in Table 11 and have been taken into consideration as part of the project design in order to adequately mitigate them. The first and most important assumption at the objective level is "Political and social stability" which will affect the GDP which will affect the amount of investment by the public sector. As additional resources are allocated to economic and development, less will be available for environmental concerns. At the objective level, many of the elements of the GEF alternative are geared to produce agreements amongst stakeholders across regions with independent mandates to manage their natural resources. The project design has included activities, such as mediation of conflicts between parties to reduce the risk of conflict over how SINAP should be managed. Additionally, adequate public relations and opportunities for public comment and participation have been provided for. Recent Political change has not changed the commitment to an organized but decentralized SINAP, in fact it has strengthened that process. The other key assumption is that inflation will remain within predictable limits. There is a moderate risk to the project of Nicaragua becoming poorer and that the transfers as a percent of GDP will decline. Nicaraguan dependency on oil and current economic conditions are barely enough to pay public servants. The need for hard currency and a slight inflationary tendency of the national currency lead us to believe that the risk is moderate but persistent. A project steering committee comprised of both public and private sector representatives will manage change and mitigate risk. Ample participation by international donors in the project also serves to mitigate the effects of internal change.

115. By removing the barriers, Nicaragua will be able to establish an environment that will enable the long-term removal of the root causes of the threats to biodiversity. One of the main Global Benefits of the Project is the conservation of representative samples of national ecosystems and species of global significance such as the Resplendent Quetzal, Sea turtles, or any of the other endemic species to Nicaragua or to Central America that depend on Nicaraguan corridors. At the same time the project will make a significant contribution to the country's fulfilment of Convention on Biological Diversity commitments, especially the implementation of the Program of Work on Protected Areas adopted on COP7 aimed to enhance protected areas management as an instrument for biodiversity conservation (see below in Project Conformity with regional priorities). Through a new SINAP management (Outcome 1), the project will contribute to the main outcomes of Strategic Regional Program of Work on Protected Areas (PERTAP)[21]. The on-the-ground actions in agroforestry and improved tree cover will have indirect benefits in the reduction of Green House Gasses through the increase in Carbon absorption, and storage. These are secondary effects and will not be directly measured by the project

Expected global, national and local benefits

116. At National level project will contribute to a redefined SINAP that will better fulfil its objective of conserving representative ecosystems of the country that have been declared as

[21] Derived from Regional Strategy for Conservation and Sustainable Use of Biodiversity in Mesoamerica.

protected areas in different categories, under a improved participative management model including legal and inter institutional arrangements that have been, until now undefined. This new management model will be built considering national policy priorities, such as de-concentration of MARENA functions. Nationally, the participation structure will create a cost-effective vehicle for communication between DGAP and the landowners and municipalities. In a same way, it will have incidence at national economic policy, working for protected areas financial self-sustainability, through the implementation of financial mechanisms for conservation, while demonstrating protected areas contribution to national economy. The integration of DGAP with productive sectors will demonstrate to international counterparts concrete steps towards protecting their environment as an integral part of the economic development process, which is compatible with the Millennium Challenge.

117. At Local level, project will improve livelihoods in protected areas and buffer zones resident population, mitigating the effects of current practices with productive practices based on biodiversity sustainable use, which means a significant change on traditional management models. Also, project will provide key stakeholders (including NGOs, municipalities and Regional Governments) with the knowledge required to enhance protected areas management.

Country Ownership: Country Eligibility and Drivenness

Country Eligibility:

118. The Government of Nicaragua subscribed Convention on Biological Diversity on June 13th, 1992; later it was approved by Decree 1079 (November 15th, 1995)[22]. Convention´s signature was ratified by National Congress through Decree 56-95 (November 16th, 1995)[23]. In accordance with the convention, Nicaragua has completed the following:

- Key Publications in response to conventions: (1) the country biodiversty study, *Nicaragua: A Country Study*[24] (1988); (2) the National Biodiversity Strategy and Action Plan (GEF support)[25] presented in four scientific-technical studies on Zoological biodiversity, State of Conservation of the Ecosystems of Nicaragua, Economic Valuation of Biodiversity, and Genetic Resources and Biotechnology.
- National Communications and Reports to the CBD: (1) In 2002, Nicaragua submitted the second National Report to the CBD (which was the first for Nicaragua) and through the GEF Biodiversity Enabling Activities the country completed the national capacity assessment for: Incentives to Conservation and Sustainable Use of Biodiversity, Biodiversity Monitoring System, and Evaluation of Threats to Biodiversity; and (2) In 2003 the First Report of execution of the CBD commitments related to protected areas was submitted and (3) the Third National Report (which was the second one for Nicaragua) was submitted in December, 2005.

[22] Published in La Gaceta, Diario Oficial, Number 215 of November 15th, 1995.
[23] Published in La Gaceta, Diario Oficial, Number 245 of December 29th, 1995.
[24] Financed by Environmental Program Nicaragua Finland, through Project Support to Protected Areas and Biodiversity.
[25] Presented through Ministerial Agreement Number 27-2002, published in La Gaceta, Diario Oficial Number 156 of August 20th, 2002.

Project Conformity to Global Priorities

119. The project conforms to *Global Priorities, Regional, and National priorities.* The project contributes to the four central programme elements of the Work Programme for Protected Areas (CBD-COP7) by supporting (a) strengthened management systems; (b) investments in clean and/or low impact alternate technologies; (c) improved policies; (d) establishing minimum standards and frameworks for PA management. Section IV Part VII presents a complete description of the fit to the specific programme elements and to regional and national priorities. Through the enabling environment that will assure better conservation and management of PAs, the Project constitutes an important step towards supporting Article 8 "In situ Conservation" of Convention on Biological Diversity and of the national bio-diversity strategy and an important step towards MDG 7, which is to ensure a sustainable environment. The present situation is not on pace to assure the COP VII objective of financial sustainability of PAs by 2008, nor is it on track for the "establishment and maintenance by 2010 for terrestrial and by 2012 for marine areas of comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas" and to "significantly reduce the current rate of biodiversity loss at the global, regional, national and sub-national levels and contribute to poverty reduction and the pursuit of sustainable development." This project will provide important actions to steer Nicaragua towards compliance with these obligations. Outcome 2 will actively engage DGAP as an actor in the economic development process existing within PAs. In doing so, the project responds to multiple development issues signalled in the Implementation Plan for the World Summit Sustainable Development and in the Vth World Park Congress Agreement and Action Plan.

Project Conformity with Regional Priorities.

120. The project directly contributes to the Regional Strategy for Conservation and Sustainable Use of Biodiversity in Mesoamerica[26] within the Strategic Regional Work Program on Protected Areas (PERTAP)[27] that outlines among its main outcomes the participation of different social sectors in protected areas management, the strengthening of technical and administrative national capacities for protected areas management, the application of mechanisms for protected areas financial sustainability and the monitoring of changes of the state and integrity of natural and cultural heritage elements in protected areas. These elements are all addressed within the scope of this project.

Project Conformity with National Priorities and UNDAF.

121. The project responds to the major national plans are described in the situation analysis of this document. The project has included initiatives that will reduce poverty and stimulate

[26]This Strategy was formulated as an effort to coordinate political and institutional actions for conservation, sustainable use and equitatable distribution of benefits derived form biodiversity. It is conceptualized as a coordination and cooperation mechanism between Mesoamerican countries by the Biodiversity Technical Committee of Central American Commission on Environment and Development –CCAD. This initiative was facilitated by the Mesoamerican Biological Corridor Project (November, 2003).

[27] PERTAP is an instrument generated by member countries of the Central American Commission on Environment and Development, with the objective of strengthening the integrated, harmonized and participative management of regional protected areas systems for the protection and conservation of those natural spaces, freshwater, and coastal and marine resources that represent unique ecosystems or wildlands and constitute reservoirs of natural resources and biodiversity for present and future generations. It was also established by the Protected Areas Technical Committee of CCAD, under the Mesoamerican Biological Corridor Project (July, 2005).

economic development amongst the private property owners who inhabit selected PAs in line with the PND, the ERCERP[28]., and the PND-O (See also Detailed Description of Conformity to National Priorities). Outcome 2 has been included in the project to provide DGAP linkages to productive sectors and a mode of operations that will begin to bridge the gap that has traditionally existed between private property owners and DGAP. Project Outcome 1 will develop the agreements for the management of PAs under a decentralized and de-concentrated system, which is another important national priority and a stated priority of the stakeholders in the autonomous regions.

122. The re-definition of SINAP matches the Nicaraguan Environment Plan for 2001-2005[29] that describes the problems faced by the country's protected areas and defines priority actions for the National System of Protected Areas. The project will also support the National Biodiversity Strategy and its Action Plan states as one of its immediate objectives to promote the economic viability of biodiversity, considering its richness an economic value, as well as the costs of its degradation for the country. The development of better management plans and better protocols for management that elevate the importance of conservation status in the management decision-making process will be important steps in this process. The Detailed Description presents numerous and direct contributions to the current SINAP Development Strategy. See also Table 9 for linkages.

123. The Project is of high priority for UNDP, as is coincident with is Country Cooperation Framework (CCF 2002-2006), where UNDP, "counting on the support of specialized organism in United Nations System, will contribute to the environmental organization and the development of energy with the purpose of improve life quality and security of the poorest population". More specifically, the CCF Nicaragua hopes to meet the goal of "improve Government and civil society technical capacity to integrate environmental policy guidelines with plans and programs of national development. As well as the validation of new and successful experiences of conservation and sustainable use of ecosystems at global and local level".

Sustainability

124. The outcomes of the project are specifically designed to create an enabling environment that will remove the barriers whose persistence creates an un-sustainable political, institutional, social, and financial situation. No single project can remove all of the barriers that confront SINAP. The difficult financial situation of SINAP warrants that long-term actions towards barrier removal be taken. This project, in addition to it's present actions, will orient future actions both in the management of the system and in long-term financing.

125. The **political/institutional sustainability** will be achieved through the political and administrative reforms proposed and through the re-designed SINAP conceptual framework and management plan proposed in Outcome 1. These will enhance the participation of territorial actors on protected areas management through a decentralized process and will be accompanied with a series of consciousness-raising activities aimed to achieve recognition of the value of SINAP to the national economy. The improved awareness of the nations

[28] Poverty Reduction Strategy (Estrategia Reforzada de Crecimiento Económico y Reducción de la Pobreza-ERCERP), July 2001, Government of Nicaragua.
[29] Idem

lawmakers, coupled with the improved structures for the participation of local and national level stakeholders (output 2.1) and co-managers (output 2.3) leaving established and measurable protocols and standards for the future.

126. **Social sustainability** will be achieved through the participatory structures (output 2.1) that are specific to that purpose. This project also involves DGAP in the economic development process, thereby assuring the project's fit to the social demands of the local stakeholders. The improvement or re-conversion of productive systems based on sustainable practices (in agriculture, fishery, forestry and certification) orient locally articulated needs towards biodiversity conservation. Social sustainability will be enhanced by promoting the broader public's understanding of the values of biodiversity and the importance of conservation of remaining natural areas.

127. **Financial sustainability** is one of the cornerstones of the project to which Outcome 3 is dedicated. The project will develop the long-term framework to reduce the enormous financial gap that presently exists. The system-wide financial strategy that will provide the boilerplate and benchmarks for the sustainable financing of the system in the mid and long-term. The strategy will be based on information generated from transparent and accurate revenue and accounting system (output 3.1). The strategy will be backed up by diversified financing though national and international sources as describe in outputs . The enabling conditions will be created through the passage of legislation on natural resources tariffs that would improve the financing for PAs as described in Outcome 1.

128. **Environmental sustainability** is enhanced through the combination of all outcomes of the project designed for that purpose. The main element will be the re-designed SINAP and the financial plan to support it will together orient and finance future actions. On the ground actions to enhance environmental sustainability are sough in output 2.2, which will create partnerships between DGAP and agencies drivers in the economic development process to analyze economic development actions within PAs and to work to establish models that convert these into biodiversity friendly, or mitigated, actions. With these actions, future economic development involving territories within PAs in support of the PND-O, poverty reduction activities will be implemented in a coordinated manner with DGAP and with strict attention being paid to the conservation status of the biodiversity present within the PAs where the investments occur.

Replicability

129. The project establishes framework actions with site-level testing to provide adequate modification of the systems that will facilitate replication. The two-tier approach, presented in the introduction to the project strategy section, is specifically designed for the purpose of replication of the management systems throughout SINAP and to create the capacity to continue developing and perfecting these. The framework documents will present a plan of action that will define and orient future development actions to SINAP and the financing plan will seek the resources needed to implement those actions. These will include actions such as the up-scaling of the management and financial systems that are tested at the site level. Most specifically, improved management systems will be implemented at the system level (DGAP) and tested for functionality and connectivity to the system at the site level within 4 model PAs. Based on the results of this experience, the systems will be modified as necessary for financing and deployment as part of the development strategy. We expect that these systems,

when tested, can be replicated immediately to 8 additional PAs under co-management arrangements. Provisions are made to translate these tools into local languages to also facilitate up-scaling to areas of the Atlantic where project management units exist. There is a possibility that these tools could be replicated in all areas where some management structure currently exists, which is estimated at 29 areas. Stakeholder participation activities may be replicated beyond the test case areas (4) to a total of 39 areas. To also facilitate this process, dissemination through workshops and seminars and publication or the lessons learned are considered. The up-scaling of lessons learned from this project and from the WB Corazon and Meso-american biological corridor projects, as well as PASMA, will form the backbone of the financing plan; including, for example, provisions for the sustainable financing of the Natural Resources Information System (SINIA) and for the up-scaling of management planning to all areas, etc.

PART III. MANAGEMENT ARRANGEMENTS

Consultation, coordination and collaboration between IA's, and IAs and EXAs

130. During the project design phase, there has been extensive consultation and coordination between IAs, specifically UNDP and WB to enhance stakeholder participation and to avoid overlapping and duplication of functions in the target area.

131. The WB/ MARENA FSP "Corazon" of the Mesoamerican Biological Corridor (Corazón del Corredor Biológico Meso-americano - RBT-CCBM-) is thematically complimentary in strengthening the administrative, technical and political management capacities of SINAP. During the PDF-B phase, the project had no local coordinator. Meetings were held with an interim coordinator to solicit input on the present proposal. Ongoing collaboration is foreseen in the areas of: the determination of economical activities inside the protected areas that will contribute to the domestic economy, validation of the geographical information of SINAP, and in the technical support for the development a "foundation" for the management of the National Environmental Fund. The WB "Corazon" project (through the Project Coordinator) has been invited to participate in the Project Coordination Committee to ensure ongoing coordination and thus avoid overlap. MARENA as executing agency will be responsible for maintaining good communications and avoidance of overlap between the two projects and to disseminate the learned lessons between the projects. At the operations level, formal contact between the two projects is proposed at two levels. First, systematic and regular contact between project staff for the two projects in formal meetings between the executive staff from the two projects will be undertaken on a semester basis. At the time of this proposal, this will be reconfirmed with the Corazon management team. This level of contact will allow for the exchange of advice and cross-fertilization of experiences between the two project management teams. This aspect will be very important to both teams who will be dealing with several common issues, such as the issue of private landowners. This will also enable Corazon staff to track the progress of system-level tools that they may incorporate into the implementation of their project. A yearly high-level executive contact between the Minister, UNDP, and the WB representatives in Nicaragua to exchange ideas and inputs from the managers of the respective projects. It is also possible that the tri-partite reviews could also be handled jointly if the parties deem

appropriate. The form and procedure for this level of contact will be discussed between the parties during the inception phase as will the issue of common tri-partite review meetings. Any decisions made from any of these levels would be incorporated by the PMU into the annual workplans.

131 (b). The GEF/WB biological corridor of the Atlantic (CBA), as well as the GEF/UNDP Mesoamerican biological (CBM) regional projects, form part of the baseline situation. Although these are not quantified in the incremental cost assessment, the contributions of these projects will support many of the actions of this FSP. The CBA project did clearly raise awareness, those efforts need to be continued but targeted to more specific audiences that will lead to system-level improvements, such as with elected officials and moreover, those responsible for financing the system. The awareness raised has not translated into increased funding from national sources by PAs. The awareness raised by CBA and MBC has been effective at the site level, especially in the Atlantic, but is still lacking in the relatively dis-connected Pacific and Central region PAs. These actions provide the lessons learned for the development of the new SINAP strategic framework, governance structures, and financing.

131(c). Site-level management planning by the CBA project also provides us with the baseline experience. This FSP will invest in the system level systems needed to process and interpret that information for MARENA and for the congress. The same is true for the development of social capital. Many social structures exist that were created by the CBA/MBC projects. This FSP will connect them into a better decision-making framework at the system level, while working on establishing improved site level structures in areas where the CBA project did not reach.

131(d). Finally, the development of the outputs of this project will be enhanced by the CBA investments in the SINIA system and the biodiversity monitoring system. This project will use the information from those actions in the development of the SINAP strategy and re-definition of the system. In addition, this project will work towards the sustainable financing of the services that these systems provide.

Implementation/execution arrangements

132. The Government of Nicaragua will execute the project over 3 years under the UNDP National Execution (NEX) mode. In its capacity as executing agency, the Ministry of Environment and Natural Resources (MARENA) will be responsible for directing the project, meeting the immediate objectives and projected outputs, making effective and efficient use of the resources allocated in accordance with this Project Document, and ensuring effective coordination between the Project and the other existing projects in the country dealing with strengthening of the SINAP, including coordination with WBO and DANIDA.

133. The Project will be coordinated through a Project Coordination Committee (PCC), which will serve as the operational entity for executing the project. The PCC is chaired by a senior level representative of MARENA and representatives of principal national level associates and co-financers (PASMA-DANIDA). Once the Project is in the process of being approved, MARENA, together with UNDP, will take on the responsibility of forming the Committee, ensuring the participation of all the interested sectors. The committee has been meeting on an informal, bi-monthly basis during the project development stage. During project implementation, the committee will meet quarterly and every 6 months thereafter. These aspects will be confirmed during the yearly formulation of annual work plans.

134. The project staff structure will be comprised of a National Project Director (NPD) and a National Project Coordinator (NPC). The NPD position is required within Nicaragua's protocol for managing external donations. The NPC is the project manager of the administration and execution of the activities provided for in the project. The NPC will operate from the target area of the project with the support of a technical assistance team.

135. On a yearly basis, the PCC will report to an executive committee comprised of UNDP-Nicaragua, MARENA and the Foreign Affairs Ministry. The Executive Committee adopts strategic decisions, approves the project's operational plan and its budget. The Executive Committee meets yearly in a tripartite review meeting.

136. MARENA will follow the norms and procedures specified in UNDP's NEX manual in the execution of the project. UNDP will track the direction and guidance of the project in order to contribute to maximize the scope, impact and quality of its outputs. In addition, as a GEF implementing agency, it will be responsible for administering the resources in accordance with the immediate objectives of the Project Document, and observing its own guiding principles of transparency, competitiveness, efficiency and economy. Financial management and accountability of resources as well as other project execution activities will be under UNDP country office direct supervision. Upon approval of project, and development of annual operative program, in cases agreed by project counterparts, the UNDP Nicaragua office will be able to charge the project directly for Implementation Support Services (ISS) on a transaction basis using a universal price list. If required, local NGOs might be sub-contracted by the project to carry out specific activities under their field of expertise in accordance with the CDMs.

137. MARENA, is the Project administrative and managerial body. The UNDP/PMU will implement the Project in accordance with UNDP's administrative procedures for National Execution (NEX) projects. The UNDP/PMU will carry out the internal project monitoring and evaluation activities, taking into consideration from the outset the local project management capability, the constraints and training needs, as well as the effectiveness and efficiency of communications between those ministries and institutions relevant to the Project.

138. MARENA, through UNDP/PMU, will prepare the Annual Work Plan reflecting the Project's activities and the outcomes to be achieved through their implementation. The Plan will indicate the implementation periods of each activity and the parties responsible for carrying them out. The first Work Plan will be completed and attached to the present Project Document no later than 30 days after its signing. During the elaboration of the AWP, the participation of the project partners will be essential for the success of the planning phase. These are PASMA-DANIDA, WB as well as INTUR and IDR.

139. Finally, in order to accord proper acknowledgement to GEF for providing funding, all projects documents will include a paragraph to explicitly require that a GEF logo appear on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgment to GEF. The UNDP logo should be more prominent and separated a bit from the GEF logo if possible as, with non-UN logos, there can be security issues for staff.

140. The Government of Nicaragua will implement this project under the regulations for a UNDP National Execution Project (NEX). MARENA will be the Agency responsible for the

projects execution, which will include providing guidance, the achievement of the objectives and expected outcomes. They will achieve the results through the efficient use of the assigned resources, following using this Project Document as a guideline and by guaranteeing the effective coordination between this and other projects in the country involved in SINAPs strengthening. This will imply the coordination with other donors that participate in these efforts, as well as with governmental institution as is INTUR. The remaining execution/implementation arrangements will be defined further on in the process.

PART IV: MONITORING AND EVALUATION PLAN AND BUDGET

141. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF. The Logical Framework Matrix provides performance and impact indicators for project implementation along with their corresponding means of verification .These will form the basis upon which the project's monitoring and evaluation system will be built. Please refer to the Detailed Monitoring and Evaluation Plan and Budget in Section IV, Part VIII.

PART V: LEGAL CONTEXT

142. The present Project Document will be the instrument referred to under Article 1 of the Basic Agreement for Technical Assistance between the Government of the Republic of Nicaragua and the United Nations Development Program (UNDP), signed by both parties on May 4, 1978. For purposes of the Basic Agreement for Technical Assistance, where the term "Government Executing Agency" is mentioned, it is understood to mean the host country's executing organization as described in said Agreement.

143. Any substantial revision of the Project Document that has significant implications for the contents of the Project, as well as the use of the allocated resources, will require the approval of the Project Steering Committee, the signature of the National Project Director, in representation of the Public Ministry, and the signature of the Executive Director of MARENA, who will accompany the direction and guidance of the Project.

144. The following budgetary revisions will require only the approval and signature of the Resident UNDP Representative:

- Compulsory annual revisions, reflecting the real expenses of the previous year, duly certified by the national counterpart, and the reprogramming of unused funds for subsequent years, based on the delivery of inputs as agreed upon in this Project Document.
- Revisions that do not entail significant changes in the immediate objectives, the project's activities or its outputs, but that result from a redistribution of the inputs agreed upon, or are due to increased expenses caused by inflation.

145. The substantial or budgetary revisions will be prepared by UNDP/PMU, in accordance with the requirements of the Project itself.

146. Furthermore, in case there are adjustments to the immediate objectives, the outputs or the activities proposed in the UNDP Project Document, substantial revisions will need to be made in advance, and must receive the signed approval of both UNDP and the Executing Agency

SECTION II: STRATEGIC RESULTS FRAMEWORK

Project Background

147. The baseline actions have had positive effects in terms of establishing institutional infrastructure in the indigenous territories, development of protocol for PA management plans (establishing 25), initial steps in business planning, and preliminary work in financing in the form of studying Payment-for-Environmental Service schemes and implementation of localized eco-tourism projects. Most recently, a robust experience with public-private partnerships for co-management in 9 PAs has been completed. Evaluations of these experiences indicate low levels of management and financial success. Very few system-level actions have been attempted. The system is now under-funded, understaffed, and lacking basic tools to ensure organizational sustainability. The origins of the system, largely forced upon landowners without conservation criteria, created social and scientific problems yet unresolved. These include the rejection of the legitimacy of SINAP, an inconclusive process of decentralization of administrative functions to municipalities and indigenous territories, and under-representation of ecosystems. The current situation is unsustainable and will impede Nicaragua's compliance with the CBD.

148. The GEF alternative will catalyze actions to respond to political, institutional, managerial, and financial challenges at the system-level with targeted actions across 11 PAs that will (1) improve policies and framework to enable an improved SINAP, management and financing with greater ecosystem representation; (3) enhance partnerships and participation of stakeholders and DGAP in the management of SINAP and local development processes that effect PAs and that are compatible with livelihoods and conservation objectives; and (3) create enabling conditions for sustainable financing; and (4) effective and adaptive management. The GEF alternative will last 3 years and will require a total investment if $$5,181,688.00 U.S.

Incremental Cost Assessment

149. The first efforts to strengthen SINAP through a system-wide approach were undertaken in 2000 with support of the Finnish-Nicaraguan Environment Programme (PANIF-APB), who initiated the formulation of the SINAP Strategic Development Plan. The objective of this strategy was to develop public and institutional policies to achieve an optimally functioning Natural Protected Areas System. The strategy included: (i) organisational development (including legal reform, re-engineering of operational processes and of the coordination between key actors within the system); (ii) financing for the system (implementation of a programme promoting projects related to environmental services in protected areas and towards financial sustainability); (iii) research (scientific research projects in protected areas); (iv) land use planning (normative models); and (v) capacity building (human resources development). PANIF-APB was unsuccessful following an investment of $1,100,000.00 U.S. between 1998 and 2000. In 2006, DGAP re-initiated and completed the process producing the current SINAP Development Strategy.

150. Nicaragua has delivered autonomy of all administrative functions to the indigenous regions. A strategy document was developed by the first Environment Support Project (PASMA/DANIDA) and a proposal for the decentralization of MARENA functions to the indigenous territories. This effort ended in a stalemate that requires negotiation and mediation. The initial investment is estimated at $100,000,000.00 U.S. This theme will be further developed under the GEF alternative by the follow-up PASMA II project and by the GEF as one of the central policy measures to be undertaken.

151. Baseline efforts to de-concentrate MARENA's functions include DANIDA[30] and Finnish IDB support to the development of Municipal environmental units (UAM) through the PROAMBIENTE project and through the WB Second Project in Support of Rural Municipalities (SPDMR) who worked with a total of 70 UAMs of Nicaragua's 153 municipalities. Other investments in this area include the POSAF-project (IDB and the Nordic Development Fund) for capacity development in 15 municipalities. The Dutch organisation SNV has assisted MARENA in the development of manuals and methodologies for up-dating environmental action plans at the Municipal level and is providing technical support to a limited number of municipalities. By late 2004, MARENA defined a list of competencies to be delegated to its territorial delegations (Delegaciones Territoriales, DT).

152. The socio-economic sub-programme on Management and Conservation of Protected Areas of the IDB POSAF II initiative invested $1,620,000.00 US, which included an initial study to quantify the environmental services generated by selected protected areas in the North and Central areas of the country as part of the nations GDP. POSAF II has also funded the management plans for 5 protected areas, two of which (Datanli –El Diablo and Dipilto-Jalapa) will be supported by this project. One of the areas, Chacocente, is a model of grass-roots coordination that will be promoted by this project. The POSAF II closed in 2006.

153. Within the auspices of PROARCA and as part of the PDF-B process, the Nature Conservancy (TNC) carried out a study determining the financial needs (gap) of the SINAPs 76 protected areas, which is the cornerstone for future actions in identifying financial strategies. This process has yet to identify and systematise the actual and potential sources of revenues as well as define possible income generating mechanisms adjusted to the characteristics and financial necessities of the system. Also, legal, fiscal and administrative reforms essential to the implementation of the strategy will be developed. Several of these elements will be considered as co-financing for this initiative. TNC also facilitated the USAID Co-Management of Protected Areas Project (COMAP) where management planning, some business planning, training, and institution building occurred with NGOs in 9 PAs. The estimated baseline investment is U.S. $ 6.2 Million.

GEF supported actions:

154. GEF supported actions have been significant in constructing the baseline institutional structure in the country and in the development of the different biological corridors. To avoid double counting, these are not quantified in the baseline of the incremental costs assessment but are recognized for the foundation upon which the project will build. The Biological Corridor of the Atlantic Project *Meso-American Biological Corridor Project* was important in developing the concept of private reserves, of which there are 30 are officially recognized in

[30] Note that the term being used by MARENA is "des-concentracion" which translates into a decentralization of functions and not authority over the national patrimony or international responsibility under conventions.

Nicaragua and form part of SINAP. Although these reserves do not make a significant contribution to the system in terms of size, it is a notable advance in fomenting the participation of the private sector in biodiversity conservation. These will be incorporated into the overall governance structure for SINAP and in developing effective working relationships with the private land owners. Another contribution is the Environmental Information System (SINIA). The system will not receive direct investments from the project, but is an important asset to the communication and dissemination of lessons learnt. Although not quantified as part of the baseline, the site-level planning experiences and awareness building have been important, especially at the site-level. These have not translated into improved financing by the Nicaraguan government or in more effective lobby to enhance PA financing. This project will therefore build on those efforts and attempt to target awareness activities into populations that can influence overall support to the system. In addition to improved awareness with the population of landowners that continue to be distanced from SINAP, especially in the Pacific and Central regions (see Consultation, Coordination, Collaboration between IAs and IAs and EAs).

155. The *Biological Corridor of the Atlantic Project*, with funds from GEF/WB and the Nordic Countries, developed a strategic planning process for the regional autonomous governments from 1999 to 2005. The main objective of the project was to integrate the CBA within the CBM initiative to secure the conservation and sustainable use of the natural resources of the Caribbean region of Nicaragua through strategic land-use planning within a regulatory framework. During the execution phase, the project worked in communication, education, consciousness-raising, strategic planning, monitoring of the corridor, prioritizing areas of bio-diversity, and indigenous community development. Other actions, such as creating capacities at the regional level; the development of a Regional Strategy for the Monitoring and Evaluation for the Environment Secretaries (SERENA); the development of 5 sector-specific studies (Fishing, Mining, Tourism, Agriculture and Forestry) that provide insight as to the types of activities the private sector might pursue, 70 communal development plans, translated into Miskito, 2 regional and one municipal land use management plans, among other things. Meanwhile, SERENA was strengthened technically and financially through training and installations. The total investment made in the Atlantic Coast amounts to $12,000,000.00 U.S. The proposed project will build on that structure by working with SERENA and the governments of the autonomous regions in defining the details of the decentralization of functions to municipalities and to the autonomous governments. In addition, the management structure will be analysed for up-scaling into the Pacific and Central regions. Although these are not biosphere reserves, the administrative results in creating management efficiency by grouping PAs into a common structure are significant.

Global Environmental Objective

156. The project seeks to improve the conservation of biodiversity through an increase in ecosystem representation in SINAP and through reduction of the barriers that render DGAP ineffective as an in-situ approach as a response to the root causes and threats to biodiversity.

Status Quo Without the GEF Alternative

157. Without a GEF alternative, the baseline efforts do not provide a sufficient system-level framework to reduce the threats to biodiversity within PAs, leading to increased

fragmentation of ecosystems, habitat decline, and eventually loss of species diversity. The system is in a near state of abandonment due to the huge financial gap, dependency on donations, inappropriate policies, and constraints to effective management and financing. Without a GEF alternative, system-level actions will not occur leaving little opportunity for system wide change. Ecosystem representation will remain unbalanced leaving important ecosystems without a structure that one day may afford them with protection and mitigation of the economic development programmes that are sweeping the region. For 16 PAs with improved management, about half will slip back into financial straits while the others may maintain themselves. Without an alternative, the *status quo* threats to PAs (deforestation, simplification of ecosystems and landscapes, loss of ecosystem productivity, habitat requirements for key species, etc.) will continue ultimately to the detriment of the regions biodiversity that depends on the connectivity and contiguity of the regions ecosystems.

The GEF Alternative

158. The GEF alternative will add policy, institution building, and financial improvements that will contribute to the removal of the policy, information, managerial, and financial barriers that confront SINAP. This will be accomplished through the involvement of DGAP in the development of awareness for policy-makers, legislation, technical interventions that will lead to a new and re-designed SINAP, managerial systems, financial interventions, and involving DGAP in supporting conservation along with the need of the local landowners to co-exist with biodiversity.

159. The GEF alternative will develop effective policies to enable the adequate management and financing of the system through awareness building, valuing and disseminating information on the value of biodiversity to the national economy, and by supporting legislation that will resolve policy barriers and enable sustainable financing through new mechanisms and through access to payments for concessions from those exploiting the natural resources within SINAP. The GEF alternative will create an improved strategic framework by performing a gap analysis that will better determine ecosystem representation and prioritisation of PAs that will enable a proposal for a newly configured SINAP with greater ecosystem representation. To enable the political process and debate over the new system, the alternative will work to create a more participative governance structure that facilitates both upstream and downstream communication and effective lobby with authorities and lawmakers to encourage buy-in to the process.

160. A strengthened institutional capacity will result from the linkages and partnerships developed to enhance communication and decision-making with stakeholder participation, development of management systems in accounting, monitoring systems for the impact of economic development, Management Information Systems, and consolidated management and business planning and formal standards for co-manager performance. The effect of the above mentioned interventions will lead towards the reduction of the financial gap through strategic financial planning, increased in the national commitment to finance SINAP, through the identification of promising financial mechanisms, and through the establishment of a system that enables revenue sharing between DGAP and agencies that now control concessions for natural resources. The alternative will develop a presence with landowners through support to the implementation of environmentally friendly business opportunities in

harmony with PAs and through the development of local capacities to access programs and projects, especially in eco-tourism.

161. The alternative will work in close coordination and will receive counterpart funding from several partners. Primarily, the second phase of the DANIDA Environmental Sector Programme Support Project (PASMA II). The Programme began in January, 2006 and will conclude on December 31, 2010 with an overall budget is of up to U.S. $32 Million to support three ongoing processes: (i) The effort by the government to include the environment as a cross-cutting theme in the National Development Plan, (ii) the decentralisation process, and (iii) the need for the government and the private sector to adjust to the new, stricter requirements that follow from the recent free trade agreements and negotiations.[31] PASMA II will participate heavily in the political process, especially decentralization issues. They will take the lead on the development of the re-engineered SINAP while GEF provides the social back-stopping needed for a participatory dialogue and final design of the system.

162. The *Millennium Challenge Account* is a mechanism to foment economic development within productive sectors that will co-finance poverty reduction strategies within PAs in the pacific region. Within the system boundary of this GEF FSP actions in that affect PAs are located within the provinces of León y Chinandega through 2 key components aimed at stimulating rural businesses, especially agro-businesses ($30 M U.S.) and the development of private property rights ($26.5 M U.S.). Within the first component, the project will develop Basic conditions for increasing rural productivity by collecting marketing information, facilitating linkages in the supply chain, promoting reforms to productive polices, investigations, and promotion and investment campaigns. In addition, the project will provide services to facilitate transition, such as: the establishment of an ombudsman to support business planning and financing, support to supply chain insertion (identification of buyers, suppliers, investors, etc.), and through projects to increase the availability of water (harvesting, mini-reservoirs, payment for environmental services, reforestation, etc. Within the second window, the project will work on resolving land tenancy issues through legalization of land claims, conflict resolution and mediation, delimitation of PAs, reduction of costs and time for bureaucratic matters, amongst other basic land related services. The Millennium Challenge Account will co-finance initiatives to reduce poverty, delineation of PAs, and Payment for Environmental Service schemes through IDR.

163. In a separate initiative, The Rural Development Institute (IDR) promotes the adequate use of hydrological resources in the protected nature reserve El Tisey-La Estanzuela through the IDB Reactivation of Rural Productivity project. The project invests U.S. $500,000 for the development of a *payment for environmental services* modality. Among the primary objectives of the project are; (i) improving the physical-natural conditions in areas of hydrological power generation, maintaining continuity, quantity and quality of the water, (ii) establishing a mechanism that guarantees the contribution of communities and other water users towards improving the replenishment of aquifers by a payment for the hydrological environmental services they receive and (iii) design and consolidate an organizational structure in charge of administering and maintaining operational payments for environmental services, duly legalized with its corresponding operational guidelines. The IDR is one of the

[31] PASMA II Project Document, DANIDA, 2005.

principal partners and co-financiers for the mitigation and conversion of site-level economic processes, with which synergies have been developed on the activity level.

164. INTUR is working on the formulation of a project which will benefit several of the Protected Areas in the coffee route (*Ruta del Café)*, one of the 8 Tourist routes developed by the Institution to promote Nicaragua. This project will centre on human resources, building capacities with the local communities and increasing their literacy levels to enable tourism and environmental protection. The project will also promote investments made by tourist development in PAs and enable access to credit for small and medium enterprises. The initiative will be funded by Lux Development (Government of Luxembourg –GoL-), who will invest 6M US$ over 4 years, a total of U.S. $ 4 M with U.S. $2 M to be raised between INTUR, the private sector and the Municipal governments. In 2005, The GoL agreed to fund actions to develop the coffee route, which covers the PAs of the central region which is the Geographical Area also prioritized by Luxembourg (departments in the North; Matagalpa, Estelí, Nueva Segovia, Madriz and Jinotega). Funding is expected by 2007. As these actions will develop during the inception phase of the project, it is premature to consider this source of funding as co-financing. They have formed part of the discussions in the design of the project.

System Boundary

165. The system boundary for Output 1 is the national-level with special orientation to the nation's lawmakers and to decision-makers in the Autonomous Regions and Municipalities. The projects activities will reach decision makers in all departments. The system boundary for Outcomes 2 and 3 is the system level of SINAP with the field testing of management systems will take place in 4 PAs (Dipilto/Jalapa, Datanli/el Diablo, Pilas/El Hoyo, and Estero Padre Ramos which are located in the Pacific and Central Zones. In addition, work on concessions will take place within these PAs. Testing in the Atlantic will be considered after results are realized from the WB Corazon project. The Atlantic region will participate in the redesign of SINAP, in decentralization negotiations, and in the development of governance structures, including participation in the national council. The system boundary for support to improving productive activities will take place in the following PAs:

- Productive conversion through agroforestry systems: Cerro Musún, Kilambé, Tisey-Estanzuela, Tomabú, Quiabuc, Datanlí-El Diablo and Cosigüina.
- Certification schemes: Kilambé, Tisey-Estanzuela, Tomabú, Quiabuc y Tisma.
- Development of improved fishing practices: Estero Real and Isla Juan Venado.
- Development of sustainable forestry operations: Tisma and Mombacho.

.

166. See also Table 31 for the actions by PA. The time horizon for the project is four years.

Table 5 : Incremental Benefits Matrix

Cost/Benefit	Baseline (B)	Alternative (A)	Increment (A-B)
Domestic Benefits	SINAP is unknown to elected and pubic officials who do not know the contribution of these areas to the national economy and to regional and global benefits. This leads to public financing far below the average for Central American nations.	Increased visibility for SINAP Increased national budget allocations for SINAP Complete Policy Framework	Awareness by officials of the importance of SINAP, its contribution to the national economy, potential to contribute to growth in the economy, and contribution to regional and global benefits. Legislation that enables improved management and financing
	Stalled decentralization process hinders overhaul of system and development of policies.	Decentralization issues with respect to SINAP negotiated between MARENA, SEPCA, and the authorities of the autonomous regions	Revitalization of the negotiation process and mediation.
	SINAP is critically under financed in comparison to the region.	Improved financial planning at the system level	Improved financial information and management systems tested at the site-level and with connectivity to the system level. System level financial planning strategy. Multi-sector agreements to back the financial plan
	Management scoring in 16 PAs by TNC/PROARCA.	Fortified strategic framework and Improved Management Capability at the System level institutionalizes and utilizes scoring to make decisions throughout the system and expanded to include improved financial information.	Strategic framework produced and ratified. Improved Management Systems Improved Information and Indicators for PA management and co-management performance Financial scorecard application
	Landowners with communication structures in 9 PAs and in biosphere reserves, These are not connected to DGAP. The majority that are unconnected are generally antagonistic towards PAs	Stakeholders connected to SINAP enhance the decision-making process and provide inputs to SINAP re-engineering process.	Development of a governance structure that connects multiple groups and committees from the various regions to DGAP.
	DGAP not involved in regional economic development leading to reduced influence in the economic development process and outside of the articulated needs of the landowners.	DGAP is an actor in the economic development process through inter-institutional contacts and procedures for safeguarding biodiversity	Formation of a multi-sector committee to monitor the impacts of the status quo economic development process and to guide the conversion of existing productive systems to mitigated or clean development alternatives that increase biological values and connectivity.

Cost/Benefit	Baseline (B)	Alternative (A)	Increment (A-B)
Global Benefits	Existing ecosystems are not represented within PAs.	A redesigned and re-distributed SINAP with greater ecosystem representation and with determined biodiversity values	Improved Bio-diversity monitoring
	Economic development policy likely to increase drivers to threats to biodiversity within and around PAs	Framework for alternative production methods and clean development methodologies through inclusion of DGAP in coordination of regional economic development policy and projects.	Increase in tree cover and connectivity through conversion of productive systems to agroforestry, silvo-pastoral systems, and/or forest or more sustainable marine harvest practices. Model certification programs for successful farmers increase economic opportunities using clean methodologies.
Outcome 1: Enhanced policy and legal framework enables improved SINAP management and finances.	**Baseline:** **130,200** PASMA I 100,000 PROAMBIENTE 10, 200 SPDMR 20,200	**a) Baseline:** **130,200** **b) GEF:** **630,700** **c) Total Co-financing:** **330,000** PASMA II 330,000 **d) Total Alternative:** **1,090,900**	**GEF:** **630,700** **Co-financing:** **330,000** **Total:** **960,700**
OUTCOME 2: PA management is shared by key stakeholders	**Baseline:** **6,658,126** COMAP 6,200,000 Auraucaria 357,230 GTZ 100,896	**a) Baseline:** **6,658,126** **b) GEF:** **378,600** **c) Co-financing:** **3,000,000** IDR/M.Challenge/PRODEP 3,000.000 MARENA **d) Total Alternative:** **10,036,726**	**GEF:** **378,600** **Co-financing:** **3,000,000** **Total:** **3,378,600**
OUTCOME 3 Capacity for sustainable financing of SINAP and PAs developed.	**Baseline:** **148,700** TNC 148,700	**a) Baseline:** **148,700** **b) GEF:** **406,700** **c) Co-financing** **110,000** PASMA II 90,000 TNC 20,000 **d) Total Alternative:** **665,400**	**GEF:** **406,700** **Co-financing:** **110,000** **Total:** **516,700**

Cost/Benefit	Baseline (B)		Alternative (A)		Increment (A-B)	
OUTCOME 4: Institutional management and learning within project and MARENA.	**Baseline:**	**0**	**a) Baseline:**	**0**	**GEF:**	**384,000**
			b) GEF:	**384,000**	**Co-financing:**	**380,000**
			c) Co-financing	**380,000**	**Total:**	**764,000**
			PASMA II	60,000		
			MARENA	320,000		
			d) Total Alternative:	**764,000**		
TOTAL COSTS:	**Total Baseline:**	**6,937,296**	**Total Baseline:**	**6,937,026**	**Total GEF:**	**1,800.000**
	PASMA	100,000	**Total GEF:**	**1,800,000**	**Total Co-financing:**	**3,820,000**
	PROAMBIENTE	10,200	**Total Co-financing:**	**3,820,000**	**Total Increment:**	**5,620,000**
	SPDMR	20,200	**Total Alternative:**	**12,557,026**		
	COMAP	6,200,000				
	TNC	148,770				
	Auracaria	357,230				
	gtz	100,896				

PART II: LOGICAL FRAMEWORK ANALYSIS

Table 6. Logical Framework Matrix

Project Strategy	**Objectively Verifiable Indicators**				
Goal: Nicaraguan society conserves biodiversity *in-situ* through a sustainable National Protected Areas System					
Conceptual Framework	**Indicator**	**Baseline**	**Target**	**Means of Verification**	**Risks and Assumptions.**
Project Objectives: *"The Nicaraguan Protected Areas System is effectively managed through legal reforms, strengthened institutions, sustainable financing and partnerships."*	Number of PAs and Ha. with improved conservation management	1 PA (5100 Ha.)	50 additional PAs (321,813 Ha.) by S8	Financial statements from each PA. System-level METT scoring.	Inflation remains within predictable levels estimated at 4%/annum. Improved attitudes and lobby will increase the willingness to increase financing That political commitment to the project will continue.
	Number of PAs with Management scores above 600 on TNC scale.	1 PA above 600.	4 additional PAs with scores above 600.	Bi-annual scoring of management efficiency at the site level.	
	Reduction in financing gap.	SINAP 2007 baseline investment at June 2007 in $U.S.	Target to be determined by CEO endorsement	MARENA budget dedicated to DGAP DGAP expenditures Congressional budget figures. Agreements to support mid-term financing plan	

Outcome 1: Enhanced Policy and legal framework enables improved SINAP management and finances.	Legislation signed into law to promote effective PA management and overcome existing barriers caused by current legislation	Current legal framework causing 1. Undefined mandates 2. Low visibility for SINAP. 2. Inability to finance PAs through concessions and/or fiduciary mechanisms.	1 Protected Areas Law and 1 law on Natural Resources Tariffs passed by S8, clarifying: 1) Decentralized roles and responsibilities. 2) Increased visibility 3) financing of SINAP through GoN quota, concessions, and tariffs.	Protected Areas Law and Natural Resources Tariffs Law voted into force and published in the national Gazette	That political commitment to the project will continue. Increased awareness translates into political action by lawmakers.
	Increased cooperation for integration of biodiversity and PA management between MARENA and regional governments	Ratification of agreement for decentralization between by 0 parties (MARENA, SERENA, regional authorities, and SEPCA).	Five Authorities party to agreement by 2009.	Published agreement. Agreement on record in all institutions.	
	Financing committed to support targeted aspects of an updated SINAP strategy.	0 Agreements from multi-lateral donors, GoN, Municipalities, NGOs, Municipalities, and Universities.	At least: 5 Agreements from Multi-lateral donors 5 Agreements from GoN Ministries 1 Agreement per Municipality with PAs in their territories 2 Agreements with National Universities	Published proposal for public review. Letters of ratification by stakeholders	

Outcome 2: PA management responsibilities are shared by key stakeholders.	Number of PAs with a functioning participatory (multi-sector) in communication with DGAP.	16 have partial structures and 0 are represented and actively communicating with DGAP in a system.	At least 40 PAs with local structures functioning and systematically communicating with DGAP at the national level.	Minutes of local municipal committees Mid-term Evaluation	50% of the local actors who do not recognize the legitimacy of the PAs on their land participate in the dialogue.
	Number of agreements with co-managers signed that include defined standards and protocols.	0. agreements/contracts with protocols or standards.	9 co-managed PAs with agreements/contracts that include protocols and standards by 2009.	Published methodologies and scores.	Continued co-manager compliance and participation. Co-managers do not opt-out of co-management agreements
	Multi-sector committee coordinates and analyzes the impacts and lessons learnt of model projects to convert present practices into biodiversity compatible production.	Impacts evaluated for 0 Projects in Agricultural conversion 0 Projects in improved fishing 0 certification schemes	Impacts quantified for: Agricultural conversion projects in 11 PAs Forestry impact reduction in 2 PAs Improved fishing project in 2 PAs Certification schemes in 2 PAs	Project Evaluations Reports and minutes from inter-agency committee meetings.	Continued commitment of participating agencies and donors.
Outcome 3: Capacities for sustainable financing of SINAP and PAs developed. .	Number of PAs (both government and co-managed) reporting revenues and costs	No account reporting	3 Pilot PAs and 9 (100%) Co-managed PAs reporting revenues and costs by S4.	Independent audits reports. Central recorded data a DGAP Random annual audits Evaluation of system performance.	DGAP and PAs maintain human resources necessary to collect and report information.

	Increase in score in UNDP financial scorecard (see PRODOC Section IV for attached scorecard.)	Baseline score to be completed during inception phase	25% improvement over baseline score. Target to be adjusted between UNDP and stakeholders based on baseline scoring exercise	Scorecard evaluation	
	Revenue generated from concessions and retained by SINAP and the local PA	$0.00 derived from concessions	A total of $100,000 USD/year is generated from existing concessions by Q5.	Receipts Financial records SINAP financial audit	Concessionaires compliance with agreements Cooperation between co-managers and concessionaires.
	Increase in public investment over baseline to support PA management	2007 Counterpart funding expenditure of US $400,000	Target to be determined by CEO endorsement	MARENA budget dedicated to DGAP DGAP expenditures Congressional budget figures.	
Outcome 4: Institutional management and learning within project and MARENA	Project financial management system	0	1 system	Audited statements Quarterly Reports	The project has had positive results to be replicated at both the national and regional level.
	Number of events for dissemination of lessons learned to Mesoamerican countries	0 events	1 event executed by project closing	Press and publications Event report	

Table 7: Indicative Outputs, Activities and Semester-based Work plan

Outputs	Activities	S1	S2	S3	S4	S5	S6	S7	S8
Output 1.1: The quantitative economic contribution of Nicaragua's protected areas to the national and regional economy is widely known	1.1.1 Estimate value of economic activities, within protected areas to the national economy								
	1.1.2 Estimate value for ecosystem services in SINAP using detailed values from 19 PAs.								
	1.1.4. Implementation of a consciousness raising programme								
	1.1.5. Seminars and workshops for national officials and local stakeholders.								
Output 1.2: Legislation in place to formalize the agreements SINAP management.	1.2.1. Workshops to draft Protected Areas Law								
	1.2.2. Public consultation								
	1.2.3. Submission to congress and lobby for approval.								
Output 1.3: : Legislation in force to enable increased revenues to SINAP and PAs	1.3.1. Revise draft Natural Resources Tariffs Law.								
	1.3.2. Support to the public consultation process								
	1.3.3. Submission and lobby for approval								
Output 1.4: SINAP has an improved strategic and management framework	1.4.1. Gap analysis validates PA system boundary for protection of critical ecosystems and biodiversity.								
	1.4.2. Prioritization of present and potential PAs based on bio-diversity requirements, values and conservation needs.								
	1.4.3. Technical assistance and negotiations to resolve de-concentration issues.								
	1.4.4. Design proposal for strategy and management plan (conceptual framework) with stakeholder input.								
	1.4.5. Negotiations to ratify the conceptual framework by key stakeholders (MARENA, Autonomous Regional Government, other Government institutions) and donors.								
Output 2.1: A participatory and integrated stakeholder governance	2.1.1. Diagnostic of local capacities for stakeholder (institutions, unions, etc.) participation within SINAP co-management governance structures at the local level.								

Outputs	Activities	S1	S2	S3	S4	S5	S6	S7	S8
and communication structure is functioning:	2.1.2. Capacity building to enhance stakeholder participation in PA management, including representation.								
	2.1.3. Workshops for consulting and consolidation of the participation at the local, departmental, and national levels.								
	2.1.4. Technical assistance in organizational development at the municipal level.								
Output 2.2: Integrated stakeholder support for mitigating the impacts of economic development and integrating economic development with PA management objectives.	2.2.1. Productive conversion agriculture to agroforestry systems. (Cerro Musún, Kilambé, Tisey-Estanzuela, Tomabú, Quiabuc, Datanlí-El Diablo y Cosigüina)								
	2.2.2. Development of certification schemes for environmentally products for increase in conservation and ad valorem (Kilambé, Tisey-Estanzuela, Tomabú, Quiabuc y Tisma)								
	2.2.3. Development of improved fishing practices (Estero Real e Isla Juan Venado)								
	2.2.4. Development of sustainable forestry operations. (Tisma y Mombacho)								
	2.2.5. Coordination between INTUR and MARENA for ecotourism development in PAs.								
	2.2.6. Technical support in the design and implementation of projects for small and medium sized businesses and municipalities/ONGs, CBOs.								
Output 2.3: Protocols, standards, and indicators for co-manager performance established.	2.3.1. Workshops to draft protocol, standards, and indicators for successful co-management schemes.								
	2.3.2. Dissemination of protocols, standards, and indicators.								
	2.3.3. Compile management efficiency for system								
	3.5.4. New contracts and agreements signed.								
Output 3.1: A long-range financing strategy and plan for SINAP in force	3.1.1. Creation of a multi-agency/private sector task force committee to support PA financing and application of private sector capital.								
	3.1.2. Improved financial gap analysis: (Estimate of non-government revenues).								
	3.1.3. Detailed Analysis of capital investments and financial mechanisms and potential at the national level.								
	3.1.4. Technical support to MARENA, DGAP, SERENA, RAAS, RAAN in Finance.								

Outputs	Activities	S1	S2	S3	S4	S5	S6	S7	S8
	3.4.2. Identification and analysis of financial mechanisms to generate future revenues for SINAP (Including National Environment Fund).								
	3.1.5. Strategic financial plan developed, published and approved.								
Output 3.2: Increased annual government financing for SINAP	3.2.1 Revision of sector laws and programs to identify SINAP inputs that deserve greater budgetary assignment.								
	3.2.2 Lobby authorities and national assemblymen.								
Output 3.3 Concession payment mechanisms established and functioning	3.3.1. Inventory of productive activities within PAs.								
	3.3.2. Negotiations and agreements with corresponding agencies and with private sector to establish rates and payment mechanisms.								
	3.3.3. Financial system for management of revenues from concessions product of existing agreements.								
Output 3.4: Model PA management and business planning developed and implemented.	3.4.1. Workshops and fieldwork to update management plans in 3 protected areas updated and improved.								
	3.4.2. Technical support in the completion/updating of business plans in 4 PAs.								
Output 3.5: A administrative cost and revenue accounting system is implemented, functioning, and tested in the Pacific and central region.	3.5.1. Diagnostic of financial system and information needs for decision-making needs and capacities.								
	3.5.2. Development of financial system at system-level and site-level (4 PAs)								
	3.5.3. Development of a systems manual with procedures and guidelines for different management categories.								
	3.5.4. Audits of PAs.								
Output 4.1. Project management evolve through adaptive management	4.1.1. Project Management Unit established								
Output 4.2. Project monitoring and evaluation system	4.2.1.. Publish a document of the systematization of the most successful experiences to be used at the national and international levels								

SECTION III: TOTAL BUDGET AND WORKPLAN

Award : 00046611
Award Title : PIMS 3422 BD FSP NIC: Strengthening and Catalyzing the Sustainability of Nicaragua´s Protected Area System- SINAP
Project ID : 00055603
Project Objective (Atlas Output/Project) : Full Size: Strengthening and catalyzing the Sustainability of Nicaragua's Protected Area System

Table 8.: Total Workplan and Budget

TOTAL WORKPLAN AND BUDGET							
GEF Project Outcomes /Atlas Activity	**Responsible Party**	**Source of Funds**	**2007 US $**	**2008 US $**	**2009 US $**	**2010 US $**	**TOTAL US$**
OUTCOME 1: Enhanced Policy and legal framework enables improved SINAP management and finances	MARENA	GEF	346,243	206,817	46,105	31,535	630,700
TOTAL OUTCOME 1	**346,243**	**206,817**	**46,105**	**31,535**	**630,700**	**31,535**	**630,700**
OUTCOME 2: PA management responsibilities are shared by key stakeholders	MARENA	GEF	196,420	126,255	36,995	18,930	378,600
TOTAL OUTCOME 2			**196,420**	**126,255**	**36,995**	**18,930**	**378,600**
OUTCOME 3: Capacities for sustainable financing of SINAP and PAs developed.	MARENA	GEF	166,749	161,539	58,077	20,335	406,700
TOTAL OUTCOME 3			**166,749**	**161,539**	**58,077**	**20,335**	**406,700**
OUTCOME 4: Institutionalizing management and learning within project and MARENA	MARENA	GEF	114,667	114,667	114,666	40,000	384,000
TOTAL OUTCOME 4			**114,667**	**114,667**	**114,666**	**40,000**	**384,000**
TOTAL by Source of Fund/Donor (without PDF-B)		**GEF**	**824,079**	**609,278**	**255,843**	**110,800**	**1,800,000**
		PASMA	**329,000**	**131,000**	**20,000**		**480,000**
		TNC	**0**	**20,000**	**0**		**20,000**
		IDR	**1,084,063**	**1,063,874**	**852,063**		**3,000,000**
		MARENA	**80,000**	**80,000**	**80,000**	**80,000**	**320,000**
Total Co-Fin. (without PDF-B)			**1,493,063**	**1,294,874**	**952,063**	**80,000**	**3,820,000**
GRAND TOTAL			**2,317,142**	**1,904,152**	**1,207,906**	**190,800**	**5,620,000**

SECTION IV: ADDITIONAL INFORMATION

PART I : OTHER AGREEMENTS

Note: attach endorsement letter(s) .

[Once the GEF Council has approved the project, add letter(s) of financial commitment, MOUs with executing agency if relevant, and other official agreements.]

PART II : TERMS OF REFERENCES FOR KEY PROJECT STAFF AND MAIN SUB-CONTRACTS

[NOTE:. This Part should be added only after the GEF has approved the project, and before requesting CEO endorsement. Include TORs for Project Manager, and CTA. TORs for other key staff or sub-contracts can be developed during the project's inception workshop].

PART III: SINAP STRATEGIC PLAN SUMMARY

167. The following summarizes the SINAP Development Strategy. For each result, the strategy document lists more detailed activities, indicators, chronogram, and lists responsible parties. The Result where the GEF FSP and PASMA II will provide actions are highlighted.

Table 9: Summary of SINAP Strategic Development Plan

Strategic Objective 1: Biodiversity conservation. Conserve, protect, and manage PAs within SINAP with participation of civil society through the knowledge, valuation, and administration of ecosystems, habitat, species, and genetic material in addition to existing cultural resources		
Programmes	Results	Actions
1.1. SINAP Conservation and Management Programme	1.1.1 SINAP is redefined, geographically organized, and administered effectively.	Conceptualization and Re-dimension of SINAP
		Spatial planning of PA to support improved administration.
		Restoration and improvement of essential ecosystem functions in degraded PAs.
	1.1.2. Foment and consolidate elements that support the connectivity of PAs within SINAP	Improvement of connectivity between and within PAs at the regional and national level.
		Promotion and consolidation of conservation initiatives and protection of private lands and targeted municipalities in ecosystems with low representation and connectivity.
	1.1.3. Achieve the recovery, protection, promotion and historic, cultural, and archaeological value of PAs.	Protection, vigilance, knowledge and promotion of the historic, cultural, and archaeological resources of SINAP
1.2. Investigation and Monitoring Programme	1.2.1. Improvement I the knowledge and value of natural resources and biodiversity in PAs within SINAP	Spearhead the scientific investigation (biological, economic, historic, archaeological, social, and cultural) of SINAP and it's networks.
		Institutional mechanisms and alliances for the development of investigations and access to information in SINAP
		Preservation and recovery of the traditional knowledge from within the ethnic communities within PAs.
		Institutional capacities strengthened for the biologic monitoring and administration of PAs.

1.3 Environmental Education Programme	1.3.1. Promote the design, adoption and implementation of environmental education initiatives in at least 60% of PAs.	Develop environmental education programmes in formal, non-formal, and informal settings within SINAP
		Political communication of the importance of protected areas.
Strategic Objective 2: Sustainable financing. Promote the creation of mechanisms for the sustainable financing of PAs through the sustainable use and harvest of environmental goods and services, contributing at the same time to the achievement of sustainable development within the country.		
2.1 Programme for sustainable harvest and use of natural resources.	2.1.1. Alternatives to the management and sustained use of natural resources in PAs established and implemented	Promotion and application of environmentally friendly sustainable uses of natural resources
		Entry point, harvest, and use of sustainable natural resources in protected areas based on economic "clusters" of the National Development Plan (forestry, tourism, aquaculture, and renewable energy).
2.2. Financial Sustainability Programme.	2.2.1. The actual and potential contribution of the environment and PAs and to the national development evaluated and official political and financial support to PA administration guaranteed.	Development of economic valuation studies of environmental goods and services.
	2.2.2. Financial mechanisms for the sustainability of PAs elaborated and implemented	Financial Sustainability of SINAP.
Strategic Objective 3: Institutional Development. Foment, together with local actors, schemes for the efficient administration of PAs through the strengthening of the legal, technical, financial, and institutional framework.		
3.1. Programme for territorial and local protected areas.	3.1.1. Schemes for the establishment and function of PA administration	Consolidation of participatory mechanisms for the integrated management of SINAP
	3.2.1. Defined and consolidated an efficient and effective organizational structure for SINAP.	Organizational development and consolidation.
		Definition and establishment of technical steps and policies for the functioning of institutional entities in the management of PAs..
		Strengthen institutional presence in protected areas
	3.2.2. Strengthen the	Strengthening of the legal framework for

	institutional competencies for effective SINAP management.	administration, use, harvest, management, and protection of natural resources I PAs and promotion of actions for effective application
		Creation of a property cadastre in PAs
	3.2.3. Inter-institution and inter-sector coordination guaranteed in the management and protection of PAs within SINAP.	Inter-institutional and inter-sector coordination for joint actions on protection and vigilance
	3.2.4. Regional and international relations strengthened for relative aspects of PAs.	Compliance with the appropriate international agenda.
3.3. SINAP Operations and coordination programme.	3.3.1. Strategic planning and operation of SINAP guaranteed.	Strategic planning and operations for SINAP management
		Financing of the SINAP Development Strategy.
	3.3.2. Strengthened technical and operational capacity	Technical-administrative planning for PA management.
3.4. Local Risk Management Programme	3.4.1. Elements for the prevention, mitigation, and attention to environmental damages in PAs incorporated.	Development of an early warning and response system for fires in PAs.

PART IV : STAKEHOLDER INVOLVEMENT PLAN

Stakeholder Identification

168. There are four levels of stakeholders participating in the project: international, national-level institutions, local-level institutions and private sector concerns interacting within and influencing the management of PAs. These have participated in the design of the project and provisions have been made for their active participation in the sustainable management of PAs as part of the design of the project that includes mechanisms to insure their active participation and feedback during the implementation of the project. These stakeholders are identified within the context of the mentioned groups. Their roles in the design and the implementation of the project and the mechanisms to assure their active participation on a sustainable basis are summarized in the following presentation.

169. At the *international level*, the bi-lateral and multinational cooperation agencies that are working in the geographic area of project intervention include: the World Bank (with CCAD in the *Corazon* project), DANIDA (PASMA II), the IDB (PRODEP), and USAID (Managers of the Millennium Challenge), which finance system level projects to improve aspects of SINAP and support to local PAs as described in the baseline analysis. UNDP is the implementing agency and a principal stakeholder that will be responsible for maintaining the linkage between the international partners. These agencies are co-financiers, with the exception of the WB, who is not listed as a co-financier due to GEF rules for co-financing. The connection with the WB/Corazon role is further described in the IA linkages section. Linkages between the project managers of the mentioned projects were planned through regular meetings and workshops with project and MARENA staff members to fit the FSP to the SINAP Development Plan and to the PASMA, COMAP, and the WB to coordinate project activities and exchange lessons learned. These agencies participated in the design of the workplan and logical framework during work sessions and direct consultations. The only exception was USAID. In this case, IDR, who executes the Millennium challenge participated in the design of the project as did representatives from the USAID sponsored COMAP project. The WB Corazon project did not have permanent project representation during the development phase of the project. To mitigate this problem, an interim representative was agreed upon by MARENA and participated in the formulation of this project's design and workplan, and in defining the system boundary of this FSP to assure that project actions are complementary. To maintain communication between UNDP, the PMU, MARENA, and the WB Corazon project, two levels of communication are considered. First, a bi-annual meeting should be held between the upper project staff members of both projects to discuss the respective workplans and how the SINAP FSP can provide complementary action to situations that arise in BOSAWAS, and how in a reciprocal manner, the SINAP FSP can incorporate the lessons learned from the Corazon project into the workplan at 6 month intervals. The final meeting each year should be held at least one month prior to the yearly tri-partite review meeting between UNDP, The Minister of Environment and Natural Resources, and WB/Nicaragua representatives, who will be invited to comment on progress between the projects and effectiveness of cooperation. This aspect would be agreed upon in an executive level

meeting to be held between the parties during the inception phase of the project and documented for Regional UNDP and WB officials and for GEFSEC. From these two levels of intervention, suggestions for improvement in the project annual workplan will be noted with follow-up in the form of additions to the workplan through the annual planning process described in the Monitoring and Evaluation Plan and Implementation Arrangements sections. The first meetings for both levels will take place during the inception phase of the project.

170. At the *national level*, the executing government agency is MARENA through the DGAP, who are described in the Institution, Sector, and Policy Context section. The project will be implemented by MARENA, which will coordinate with the other institutions listed. The outgoing CBD Focal Point was involved in the design process and accompanied the entire PDF-B process. The new MARENA officials and CBD Focal Point, who is currently a member of the Biodiversity and Natural Resources Department of MARENA where the FSP have been briefed on the project by UNDP. The new officials will be involved in the development of the initiative during a subsequent round of PDF-B consultations described below. The national institutions listed below participated by sending delegates to work sessions for the design of the project workplan and also participated in bi-lateral meetings with members of the design team. They are also described in the Baseline Assessment for the projects that they manage.

171. In addition to those mentioned, the following national government agencies participated in bi-lateral meetings to coordinate project output and will play the following roles:

- *Ministry of Agriculture and Forestry* (MAGFOR): is mandated (Law 290) with the formulation of policies, plans and strategies of agricultural and forestry development, the identification and prioritization of credit and technological attendance, proposals for the distribution policy, property and use of the State rural lands, formulation and direction of plans for animal and vegetable sanity, to manage and supervise the National Plaguicides, Toxic, Dangerous Substances and other Registration. MAGFOR coordinates with MARENA the formulation of proposals and ecologic protection programs with emphasis in the conservation of lands and waters, as well as to formulate and propose the delimitation of the areas and limits for agricultural and forestry development. MAGFOR is the government entity implementing the Agricultural Technology II Project in support to the World Bank/PRORURAL (PTA 2) project. This project is co-financed with the GEF/WB Corazon of the Mesoamerican Biological Corridor Project. MAGFOR oversees several important entities: the Nicaraguan Institute for Agricultural Technology (INTA) and the National Forestry Institute (INAFOR) and the Nicaraguan Foundation for Technical Agricultural Development (FUNICA). Within the scope of the project, MAGFOR will participate as the prime entity for Geographic Analysis in coordination with PASMA in the implementation of the gap analysis and in coordination and contact with groups of producers through their local representatives.
- *Rural Development Institute* (IDR): It supports the productive development of small and medium producers of the rural sector, through the execution, administration and coordination of programs and investment and infrastructure projects with the purpose of enhancing productivity and efficiency, to increase employment and revenues, to improve level of rural population's life in general and to protect the environment and natural resources. Its activities rotate around increasing competitiveness, to reduce rural poverty and ecological vulnerability. IDR manages the PRORURAL project, which is a multi donor project for the agricultural sector, whose goal is the development of competitive

activities related to the production, distribution and consumption of goods and agro-services in rural territories, maintaining and expanding participation in national and international markets, providing for the increase of rural families in agri-businesses, reducing vulnerability to external factors and implementation of a national and local institutional framework that facilitates consolidation and expansion. In addition, IDR executes the Millennium Challenge that will provide for environmentally sound production in many of the areas of the Pacific where PAs are located. As a result of this role, IDR was sought as a partner to draw MARENA closer to the economic development process by integrating project activities that occur in and around PAs in a program to convert present production to that in line with PA conservation objectives, which was incorporated into the project design in the form of output 2.2. IDR will be the lead agency in the execution of these activities in coordination with DGAP and local producers and municipalities.

- *National Forestry Institute* (INAFOR): regulate and to controls management plans for forestry, granting permits for forest use within defined districts. They are charged with promoting the sustained use of forests. INAFOR also studies the commercialization chain for lumber, provides for vigilance of the forest resource, and combats illegal traffic of wood. Through their management plans, they control concessions for timber extraction based on management plans, including those in PAs. Within the scope of the project, they will work with DGAP to coordinate with forest users and negotiate the development of concessions for SINAP within the output 3.3.
- *Nicaraguan Tourism Institute* (INTUR): They will be a partner in studying the eco-tourism industry and in developing a proposal for long-term eco-tourism development. They have developed Strategic Planning Zones for Tourism (ZEPT), which cover protected areas within SINAP (Table 21). INTUR participated in several bi-lateral meetings and will coordinate sustainable tourism agreements and small-scale projects in the Central zone of the nation under the auspices of output 2.2 (see activities within the Semester Based Workplan).
- *Nicaraguan Institute of Territorial Studies* (INETER). The organization responsible for climatic, hydrologic, geographic, and other data. Their role within the project will be support to management planning, participative management of natural resources, and delineation of protected areas.
- *Ministry of Industry and Commerce* (MIFIC). Develop strategies and policies for sustainable and competitive economic development and promoting access to external markets, foment free competition, and enhance the insertion on Nicaraguan businesses into the world economy. Related to the project, MIFIC is charged with the commerce of any state resources and within that mandate, the efficient use and exploitation of the same for marine resources and fisheries, forestry and mining. In coordination with MARENA and INAFOR, it analyzes and approves the grant of concessions on natural resources through the National Administration of Fishing and Aquaculture, the National Administration of Forest Resources and the National Administration of Geologic Resources. They will play a role in developing schemes for sharing and transfer of concession fees (output in coordination with MIFIC agencies, MARENA and INAFOR. The main role of MIFIC within the Project is the negotiation of concessions, and promotion of initiatives for exportation.

- National/international NGOs: Other international/national-level stakeholders also include one international NGO, TNC participated in generating information to support the design of the project, in the form of the financial gap analysis and has also participated in meetings in the development of the workplan with COMAP project representatives. In addition, selected NGOs involved in the co-management of PAs were consulted locally on the design of the project.

172. To strengthen participation at the local level and to resolve the issues of decentralized management, outcomes 1 and 2 of the project strategy were developed with stakeholder input from the *Autonomous Regions and local level actors*. To facilitate this process, a PDF-B consultancy to promote and elicit stakeholder input was implemented to facilitate communication with these actors in lieu of the current barriers to communication. These actors involved in this process include SERENA and the municipalities, Community Based Organizations and with local NGOs involved with PAs that were selected as samples from 7 of 15 departments as described in the Stakeholder Involvement Plan who participated and defined the following roles:

- *Council of Autonomous Regions of the Atlantic* (CRAAN y CRAAS): The Autonomous Law (Law 28), authorizes these councils to coordinate with the corresponding Ministries in the elaboration and implementation of plans and programs for national development in order to harmonize national interests with the interests of Atlantic Coast communities. The councils also promote: economic, social and cultural projects; the rational use of the waters, forests, communal lands and the defence of their ecological system; the study, development, preservation and diffusion of traditional cultures of the communities; and historical, artistic, linguistic and cultural patrimony; programs to increase agricultural production, handicrafts, small and micro-businesses and agro-industries, and eco-tourism within the region. In addition, they have the responsibility for: approval of ordinances, rules and procedures for the design of regional strategies on the use and usufruct of the natural, renewable and not renewable resources; facilitation of institutional development, for the purpose of guaranteeing regulatory process, control, analysis, planning, administration, use, conservation and sustainability of natural resources. During the development of the project, the indigenous communities were consulted in Dipilto-Jalapa as were the leadership of the Indigenous communities of the Bosawas biosphere reserve and the Southeast Biosphere Reserve on the process of decentralized management and on communication with MARENA. The documented results of the consultancy will be used as inputs to the decentralization process in the definition of the new SINAP management strategy (now output 1.4). Their role in the project is to coordinate with National Ministries and with SERENA the development of plans for the decentralized management framework of PAs and guide that process in the Atlantic. Representatives were interview during the National Council Meeting in December, 2006. SERENA (RAAS) was directly consulted on the aspects involving a structure for communication with the municipalities and PAs and their input is included in the proposal for a participatory and integrated stakeholder governance structure that led to the development of outputs 1.4 and 2.1. Section IV part XIII presents an organizational chart of a preliminary stakeholder participation structures that will serve as a start-off point for the RAAS, and for municipalities.

- *Municipalities*: Representatives from Municipal Development Committees were consulted and were the main actors whose opinions led to the development of output 2.1, which is a system-level participatory governance/communication structure that will be engaged to network with producers that live within protected areas and connect these actors through the municipal-level structures to MARENA via territorial delegations (department-level). Although the design of the system is preliminary and subject to development under the FSP, the municipalities will be a foreseeable focal point for upstream and downstream communication and networking with the multiple private sector actors within their jurisdictions. The Municipal Council is in charge of dictating the different municipal ordinances, which are the legal instruments that govern to the municipality in its territory. The municipal ordinances are legal instruments recognized by Law, as are the agreements made by the Municipal Councils reach to make obligatory some measures of interest for the community development. Law 40, Law of Municipalities defines municipal competency, including the environment management and natural resources administration.
- *NGOs and Private Sector concerns*: Both not-for-profit organizations and representatives of private sector were included in the consultations at the municipal level, including CBOs of landowners in the form of producers associations. An original plan for stakeholder communication with respect to PA management was, in a preliminary fashion, determined to be technically sound, but remains un-implemented due to financial reasons, indicating problems in feasibility that negatively influence sustainability. Based on this finding, the idea to reconstruct a formal structure for stakeholder participation through existing and functioning municipal-level committees and MARENA's territorial delegations was included in the project design, now in the form of Output 2.1. The communication process with the private landowners continues to be weak. For that reason, the PDF-B process, which is still open, will be implementing 7 additional validation workshops with local level actors and indigenous representatives by July 2007. This final round of consultations is designed to communicate adaptations in the project design based on reviews and to document perspectives on stakeholder participation for the inception phase of the project. To draw MARENA even closer to the private producers, the project has created actions to create experiences in adapting local production to conservation objectives (output 2.2). Through this series of actions, it is expected that private producers will have the structures and the tools necessary to assume their role and responsibility for communicating with MARENA on PA management issues that affect them and in orienting their productive activities to conservation objectives. The local NGOs (not-for-profits) that that co-manage PAs will have involvement were included in the consultations. Based on these and input from other stakeholders, an output was included in the project design that will better define the roles and responsibilities of NGOs in the co-management of PAs. These will facilitate the implementation of improved management systems in the PAs where they operate and form an important local coordination role with local stakeholders that is complementary to the municipalities.

173. In addition, the main stakeholders will communicate through a series of steering committees. The national steering committee will be constituted by MARENA, MAGFOR, IDR, INAFOR, INE, Banco Central, MHCP, MIFIC, INTA, and Universities. These will be complemented by representatives from the major co-financed projects, PASMA, GEF/WB

Corazon, and the Millennium Challenge and PRODEP represented by IDR. The private sector will be represented through representatives of the national producers associations. They will assure inter-institutional coordination and resource mobilization. In addition, Local PA management committees will be formed to represent the PAs in each Municipality to integrate the representatives of the public and private sector. These committees will be organized and made official by MARENA and will provide oversight, inter-sectoral communication, and coordination and local decision-making.

174. A national forum or council will be organized through a general assembly that will form part of the outcome 2.1. The assembly will represent the private land-owners, municipalities, and all other principal actors. While the governance structure is under development, interim representatives will be sought to include their input in the inception phase of the project. Given the large gap between MARENA and the producers, it is expected that this will be an evolving and increasingly more representative group as the project progresses and the results of outcome 2.1 are realised. Within this structure, an executive committee will work as the liaison between the communities and the public. The specific functions include: Channelling demands from communities to SINAP, supporting field level studies, supporting channelling resources, and dissemination of lessons learned. Eventually this committee will form the private sector representation for all affairs related to protected areas.

175. Each pilot protected area, will have the support of a Local Management Committee, integrated by representatives of the public and private sector related with local management of the protected area. These committees will be organized and made official by MARENA and will form part of the structure promoted in output 2.1. The organizational chart of the communication process between actors shows the Municipal Environment Committee. Some of the actual co-managed PAs have independent committees while others have the committees connected at the municipal level. All areas and territories may vary according to their management preferences and structures.

PART V: PROBLEM, THREATS, AND BARRIER ANALYSIS

Table 10: Problem, Threats, And Barrier Analysis

Problem/Impacts	Threats	Causes	Barriers	Solutions
Landscape –level changes in ecosystems ▪ Structural simplification ▪ Changes in distribution of ecosystems across landscape ▪ Reduction in connectivity of ecosystems ▪ Functional simplification ▪ Changes in Ecosystem services: provisioning, functioning, support, and cultural. Physical Impact and problems caused by results of deforestation and changes in land morphology due to leveling or settlement effects: ▪ Sedimentation of aquatic environments and river and canal infrastructure ▪ Loss of genetic viability ▪ Increase in salt content of agricultural soils and wetlands ▪ Exacerbated soil erosion due to changes in drainage patters causing gulley formation and torrent streams, reducing	Uncontrolled and unregulated transformation of ecosystems to productive alternatives causing: ▪ Deforestation ▪ Loss of fertility of soils/sites ▪ Micro-climatic changes Ineffective Administration of Wilderness Resources ▪ Important resources not represented in SINAP ▪ Low or no administrative presence ▪	Poverty that leads to the application of accessible and inexpensive but sometimes inappropriate production practices, such as: ▪ Uncontrolled use of fire ▪ Extensive/uncontrolled grazing ▪ Hi-grading of timber Low levels of inter-agency planning with regard to productive activities. Conflicting development priorities: Economic v. Environmental leads to ▪ Low levels of enforcement caused by: ▪ Low presence of DGAP or SENRENA in PAs ▪ Low levels of personnel ▪ Undefined boundaries ▪ Remoteness	Policy Barriers: ▪ Low of visibility for SINAP ▪ Lawmakers assign higher priority to economic development projects. ▪ Restrictions on MARENA/DGAP/ SINAP financing Unplanned and inadequate ecosystem representativity within SINAP leads to ▪ Ineffective allocation of resources ▪ Division of biodiversity concerns and management concerns ▪ Spill over effect to not understanding ecosystem services Information management ▪ Ineffective allocation of resources based on repeated information ▪ Low integration of lessons learned into new strategies. ▪ Enormous cost of gathering information that already exists ▪ Inadequate linkage to decision-making information	Policy Reforms: ▪ Improved visibility for SINAP ▪ Increased knowledge of value of SINAP and ecosystems ▪ Legislation on Protected Areas to fix restrictions on financing and that clarifies decentralization issues. ▪ Legislation on Natural Resources Tariffs and legal revenue stream to support SINAP. Improved Strategic Framework for SINAP ▪ Gap Analysis of ecosystem fit to SINAP ▪ Prioritization of areas for protection based on biological values ▪ Participatory governance structure to facilitate decision making ▪ Proposal for a re-distributed and re-designed SINAP ▪ Improved PA site presence Strengthened Institutional Capacity Building ▪ Improved cost and revenue

Problem/Impacts	Threats	Causes	Barriers	Solutions
site quality			management v. knowledge management ▪ Existing information not liked to management systems Institutional Constraints in Management Capacity ▪ Deficient management systems lead to lack of information ▪ Financial systems do not generate info to support management ▪ Managerial systems have deficient baseline information at the system-level and site-level for only 16 PAs. ▪ Sustainability issues, how to pay for recurrent monitoring? ▪ Financial Constraints: ▪ Human resource capacity for financial management ▪ Cross-cutting policy issues that limit revenue streams ▪ No banking system to handle concessions that are in place and could provide revenue streams. ▪ Linkages to NGOs and others to increase sustainable financing ▪ Linkages with agencies that do take advantage of economically productive sectors.	accounting ▪ Consolidated management and business planning ▪ MIS aids decision-making ▪ Biodiversity monitoring and evaluation. ▪ Protocols for co-manager performance Sustainable Financing ▪ Financial Planning improvements ▪ Increase Government Support ▪ Reduce pressure on NGOs to pay % of donations…incentives to produce more revenues rather than disincentives. ▪ Financial Mechanisms evaluated ▪ Management of existing concessions. Economic development in PAs responds to livelihood needs and reduces threats. ▪ Environmentally friendly and competitive production systems ▪ Initial eco-tourism coordination and support to small PAs ▪ Environmental compensation models.

PART VI: RISK ASSESSMENT

Table 11: Risk analysis

Assumption	Risk Rating*	Risk Mitigation Measure
Adequate political and social stability in the country	H	Political and social stability will affect the GDP which will affect the amount of investment by the public sector. As scarce resources are allocated to social development, less will be available for environmental concerns. The 2007 budget has an almost 30% reduction for DGAP. A political process has been included to increase rather than decrease public support
Long-range commitment of the government and associates is maintained.	H	
Inflation remains within predictable levels at 4-6%/annum	M	Nicaragua depends on petroleum that has a high likelihood of increasing. The financial component of the project will attempt to generate income from public and private sources.
Effective inter-institutional cooperation to lobby lawmakers.	L	A comprehensive and integrated steering committee comprised of public and private sector concerns should lend itself to continuity during potential changes in political administration.
PASMA and MAGFOR complete their agendas without unforeseen delays.	L	Funding is secured through the PASMA project. MAGFORs contribution involves use of satellite imagery already on hand.
Continuity of commitment of co-managers in the face of more objective indicators.	M	2 Co-management organizations resigned immediately following the completion of the COMAP project. The remaining institutions have a more solid base. Working with NGOs to secure funding and policy reforms to reduce an automatic 10% charge to NGOs will stimulate not reduce their contribution.
Climatic events do not damage infrastructure	L	The siting of the equipment for the nodes in the MIS system will take protection from hurricanes into consideration. Earthquakes in Managua are an unavoidable possibility.
Overall Risk Rating	M	

*Risk rating – H (High likelihood), S (Substantial likelihood), M (Modest likelihood), and L (Low likelihood of occurrence). Risks refer to the possibility that assumptions, defined in the logical framework in Part 3, may not hold.

PART VII: FIT TO CBD-COP7 AND NATIONAL PRIORITIES

176. The project supports the four *Programme Elements* of the Work Program for Protected Areas (CBD-COP7). The overall goal of the project and collection of outputs supports *Program Element 1* through overall strengthening of SINAP. Outcome 3 of the project will improve management systems and in local management plans through all project components, which will substantially improve site-based PA planning and management. The re-conversion of productive activities to those in harmony with the environment under Outcome 2 and investments in eco-tourism and incentives through PES will prevent or mitigate the negative impacts of key threats to PAs.

177. The project supports *Programme Element 2* through the initial steps of channelling money from concessions through a financial apparatus to benefit the PAs that produce the environmental services and later, to other PAs. These actions will be a significant step towards the establishment of equitable sharing of costs and benefits arising from the management of PAs. The structures to be strengthened at the local and national level to enhance the participation of private property owners, local municipalities, and government agencies at the local and national level will enhance and secure the involvement of local communities and relevant stakeholders.

178. *Programme Element 3* is adequately represented by the actions in Outcome 1, which will develop Policies and legislation that will re-design the current SINAP and provide for sustainable financing, thereby providing a an enabling legal, policy, and institutional environment for PAs. Outcome 1 will provide the new management framework with Outcome 3 providing the tangible improvements in management systems. Together, these outcomes provide towards building capacity for the planning, establishment and management of PAs. The development of a financial strategy for SINAP and the initial mechanisms planned within Outcome 4 will contribute to long-term financial sustainability of PAs and the national PA system. Outcome 1 contains specific actions to strengthen communication, education, and public awareness.

179. The project contributes to *Programme Element 4* by developing minimum standards and practices for the national PA system in output 3.5, that will establish the protocols for co-management. In addition, the project will create financial reporting standards and management monitoring based on new standards that will match the conservation priorities for the newly classified PAs. These will be the frameworks for monitoring, evaluating, and reporting PA management effectiveness at the site and system level. The management information system proposed in outcome 3.3 and the agreements for information exchange will be the mechanisms to promote the dissemination of, and facilitation access to, scientific and technical information from and on PAs.

180. The project will create the enabling environment that will assure better conservation and management of PAs, thereby providing greater protection to biodiversity that is currently in a relatively unprotected situation with respect to the threats on biodiversity. The Project outcomes will be an important step towards supporting Article 8 “In situ Conservation” of Convention on Biological Diversity and of the national bio-diversity strategy and an important step towards MDG 7, which is to ensure a sustainable environment. The present situation is not on pace to assure the “establishment and maintenance by 2010 for terrestrial and by 2012 for marine areas of comprehensive, effectively managed, and ecologically representative national and regional

systems of protected areas" and to "significantly reduce the current rate of biodiversity loss at the global, regional, national and sub-national levels and contribute to poverty reduction and the pursuit of sustainable development." This project will validate and improve ecosystem representation (Outcome 2) and will take specific steps to assure the reduction of barriers that contribute to the persistence of threats to biodiversity. Outcome 2 specifically will actively engage DGAP as an actor in the economic development process within PAs. In doing so, the project responds to multiple development issues signalled in the Implementation Plan for the World Summit Sustainable Development and in the Vth World Park Congress Agreement and Action Plan.

Detailed Description of Fit to National Priorities

181. The major national plans are described in the situation analysis of this document. The project has included initiatives that will reduce poverty and stimulate economic development amongst the private property owners who inhabit selected PAs in line with the PND, the ERCERP[32]., and the PND-O. This project will create the coordination mechanisms and the stakeholder participation structures that will align the various productive sectors with PA management plans and with conservation objectives. The National Development Plan, stresses that the negative impacts on the environment and the mismanagement of natural resources of the country can be mitigated or reversed through appropriate management policies, especially in zones that border with agricultural uses. The adequate regulation of the use of natural resources is also presented as an action that the state can and must be strengthened, as well as the integration of programs and projects in those potentially vulnerable zones, in order for them to reach a level of integral development and ecology with the environment. Outcome 2 has been included in the project to provide DGAP linkages to productive sectors and a mode of operations that will begin to bridge the gap that has traditionally existed between private property owners and DGAP. This matrix of activities will also respond to the ERCERP proposal for the adoption and undertaking of immediate measures to reduce ecological vulnerability through better policies, institutional changes and specific projects and programs for the protection of natural resources and the environment. The PA management plans will be the best tool for assuring protection and the inter-sector agreements for implementing the activities will legitimatize the management plans as a core planning document to assure that rural development within PAs is consistent with conservation objectives. Another key output for this project that responds to the ERCERP is decentralization and its role as an integral part of the process of modernization and reform of Nicaragua. Project outcome 2 will develop the agreements for the management of PAs under a decentralized and de-concentrated system. Local governments and entities have demonstrated that they are more sensitive toward poor people and their needs, and consequently, the municipal governments will perform an active role in opening opportunities at the local level for participation, stimulating important changes of behaviour and shared responsibilities as part of outcome 1.

182. The Nicaraguan Environment Plan for 2001-2005[33] describes the problems faced by the country's protected areas and defines priority actions for the National System of Protected Areas;

[32] Poverty Reduction Strategy (Estrategia Reforzada de Crecimiento Económico y Reducción de la Pobreza-ERCERP), July 2001, Government of Nicaragua.
[33] Idem

among them is the need of a conceptually and physically redefined system and the need to incorporate other actors in the management of the protected areas. This project directly contributes to these attributes (guidelines 13 and 14) through the participatory structures at the local and national levels and through the management and financial systems to be developed.

183. The National Biodiversity Strategy and its Action Plan states as one of its immediate objectives to promote the economic viability of biodiversity, considering its richness an economic value, as well as the costs of its degradation for the country. In this sense, it comprises several activities for economic valuation and payment for environmental goods and services, as mechanism to support conservation. The valuation of SINAP will clearly develop the best valuation possible to date and will be an important step in securing the position of the PAs as the cornerstone for *in-situ* conservation. The development of better management plans and better protocols for management that elevate the importance of conservation status in the management decision-making process will be important steps in this process.

184. This project will update and responds to the directives in the Strategy for the Development of National Protected Areas System[34] as follows:

- Project Outcome 1 will support the "complete the geographic and administrative re-definition of the system" (strategy result 1.1.1)
- Project Outcome 1, the gap analysis will support the "improved knowledge of values of natural resources and biodiversity within SINAP" (strategy result 1.2.1.)
- Project Outcome 3 will formalize "established and implemented alternatives of management and sustainable use of natural resources within SINAP" (strategy result 2.1.1.)
- Project outcome 1 will "evaluate the contribution of the environment of PAs to the national development process and economy and guaranteeing more political and financial support from official sources for PA management" (Strategy result 2.2.1).
- Project Outcome 3 will support the development and implementation of financial mechanisms for the financial sustainability of PAs.
- Project outcome 1 will provide a scheme for the "functional management of PAs" (Strategy result 3.2.1.). and implementation in 4 PAs will contribute to result 3.1.1, which is "functioning schemes within PAs."
- The management systems will provide the initial steps and tested systems for institutional competencies, which will be defined in Project Outcome 3.
- Inter-institutional and inter-sectoral coordination and protection of the PAs will be found in will be improved through Outcomes 1 and 2, as will the strengthening of Nicaraguan sub-regional institutions in aspects relative to PAs (Strategy results 3.2.3 and 4 respectively) through the decision-making structures to be strengthened at the local and national levels.

[34] Such Strategy is an effort to consolidate sustainable management and conservation of protected areas and biodiversity in Nicaragua, with the implementation of short, medium and long term actions. It pretends to modernize the planning and management of Nicaragua's protected areas, aiming to a strengthening of territorial environmental management, as well as the impulse of new schemes of management and sustainable use of natural resources in protected areas, with a more consequent and pragmatic vision.

- The strategic planning capacity will be improved by the installation of a financial system and management information, with the inclusion of specialists to assist in management and financial decision-making. (Strategic result 3.3.2)

PART VIII: DETAILED MONITORING AND EVALUATION PLAN AND BUDGET

Monitoring and Reporting

Monitoring responsibilities and events

185. A detailed schedule of project reviews meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Tripartite Reviews, Project Coordination Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

186. Day to day monitoring of implementation progress will be the responsibility of the Project Coordinator based on the project's Annual Work plan and its indicators. The Project Team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

187. Periodic monitoring of implementation progress will be undertaken by the UNDP-CO through quarterly meetings with the project proponent, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

Project Monitoring Reporting

188. The Project Coordinator in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process.

Inception Report (IR)

189. A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/ *Annual Work Plan* (AWP) divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan would include the dates of specific field visits, support missions from the UNDP-CO or the Regional Coordinating Unit (RCU) or consultants, as well as time-frames for meetings of the Project Coordination Committee. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame.

190. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation. When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to

this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Coordinating Unit will review the document.

Quarterly Operational Reports

191. Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the project team.

Technical Reports

192. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

Project Publications

193. Project Publications will form a key method of crystallizing and disseminating the results and achievements of the Project. These publications may be scientific or informational texts on the activities and achievements of the Project, in the form of journal articles, multimedia publications, etc. These publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these Reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if any of the Technical Reports merit formal publication, and will also (in consultation with UNDP, the government and other relevant stakeholder groups) plan and produce these publications in a consistent and recognizable format.

Mid term and Final Evaluation

194. The project will be subjected to at least two independent external. The first will be an independent **Mid-Term Review** (MTR), at 1.5 years after start-up. This will determine progress being made towards the achievement of outcomes and will identify course correction if needed, focusing on effectiveness, efficiency and timeliness of project implementation; highlight issues requiring decisions and actions; and present initial lessons learned about project design, implementation and management. The timing of the mid-term evaluation will allow coordinators to make any modifications necessary to incorporate improvements or changes in the project's activities for the remaining project period.

195. An independent **Final Evaluation** will take place six months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation and will seek information specific to the re-engineering of the Master Plan. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals.

Audit Clause

196. The Government of Nicaragua will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the

status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government. The project foresees an audit to be conducted at the end of the project by a recognized national firm.

197. The present Project Document will be the instrument referred to under Article 1 of the Basic Agreement for Technical Assistance between the Government of the Republic of Nicaragua and the United Nations Development Program (UNDP), signed by both parties on May 4, 1978. For purposes of the Basic Agreement for Technical Assistance, where the term "Government Executing Agency" is mentioned, it is understood to mean the host country's executing organization as described in said Agreement.

198. Any substantial revision of the Project Document that has significant implications for the contents of the Project, as well as the use of the allocated resources, will require the approval of the Project Steering Committee, the signature of the National Project Director, in representation of the Public Ministry, and the signature of the Executive Director of MARENA, who will accompany the direction and guidance of the Project.

199. The following budgetary revisions will require only the approval and signature of the Resident UNDP Representative:

- Compulsory annual revisions, reflecting the real expenses of the previous year, duly certified by the national counterpart, and the reprogramming of unused funds for subsequent years, based on the delivery of inputs as agreed upon in this Project Document.
- Revisions that do not entail significant changes in the immediate objectives, the project's activities or its outputs, but that result from a redistribution of the inputs agreed upon, or are due to increased expenses caused by inflation.

200. The substantial or budgetary revisions will be prepared by UNDP/PMU, in accordance with the requirements of the Project itself.

201. Furthermore, in case there are adjustments to the immediate objectives, the outputs or the activities proposed in the UNDP Project Document, substantial revisions will need to be made in advance, and must receive the signed approval of both UNDP and the Executing Agency

Table 12: Indicative Monitoring and Evaluation Work Plan and Budget

Type of M&E activity	Responsible Parties	Budget US$ *Excluding project team Staff time*	Time frame
Inception Workshop	▪ Project Coordinator ▪ UNDP CO ▪ UNDP GEF ▪ UNCCD	1,200	Within first two months of project start up
Inception Report	▪ Project Team ▪ UNDP CO	None	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	▪ Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members	To be finalized in Inception Phase and Workshop. Indicative cost 5,000	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	▪ Oversight by Project GEF Technical Advisor, Project Coordinator and Zone Coordinators. ▪ Measurements by regional field officers and local IAs	To be determined as part of the Annual Work Plan's preparation. Indicative cost 15,000	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	▪ Project Team ▪ UNDP-CO ▪ UNDP-GEF ▪ UNCCD	None	Annually
TPR and TPR report	▪ Government Counterparts ▪ UNDP CO ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit ▪ UNCCD	None	Every year, upon receipt of APR
Project Coordination Committee Meetings	▪ Project Coordinator ▪ UNDP CO ▪ UNCCD	None	Following Project IW and subsequently at least once a year
Executive Committee Meetings	▪ Project Coordinator ▪ UNDP-CO Resident Representative ▪ Foreign Affairs ▪ MARENA	None	Yearly
Periodic status reports	▪ Project team	None.	To be determined by Project team and UNDP CO
Technical reports	▪ Project team ▪ Hired consultants as needed	$ 10,000	To be determined by Project Team and UNDP-CO
Mid-term External Evaluation	▪ Project team ▪ UNDP- CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team)	$ 40,000	At the mid-point of project implementation.
Final External Evaluation	▪ Project team, ▪ UNDP-CO ▪ UNDP-GEF Regional	$ 40,000	At the end of project implementation

	Coordinating Unit ▪ External Consultants (i.e. evaluation team)		
Terminal Report	▪ Project team ▪ UNDP-CO ▪ External Consultant	None.	At least one month before the end of the project
Publication of lessons learned *Note: replication is budgeted separately*	▪ Project team ▪ UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, etc)	$ 17,500 (average 3,500 per year)	Yearly
Audit	▪ UNDP-CO ▪ Project team	$ 15,000 (average 3,750 per year)	Yearly
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	▪ UNDP Country Office ▪ UNDP-GEF Regional Coordinating Unit (as appropriate) ▪ Government representatives	$ 10,000 (average one visit per year)	Yearly
TOTAL INDICATIVE COST *Excluding project team staff time and UNDP staff and travel expenses*		**$ 128,700**	

PART IX: ENVIRONMENT SUPPLEMENT

202. Located in the centre of the Central American isthmus, Nicaragua is an inflection point in the distribution and composition of the western hemisphere's biodiversity. Geologically, Nicaragua is a young territory that stems from the emergence of the Nicaraguan lake depression that completed the natural bridge that joined the North and South American continental masses, which were originally floating sub-continents. The biota of these sub-continents had evolved independently with flora and fauna typical of very different geographical environments and climates demonstrating spectacular contrasts in terms of evolution, adaptation, structure, and species composition. Once formed, the Nicaraguan isthmus became an especially important segment in the hemisphere's biodiversity as a gathering point of species thus leading to new associations and biotic communities. Within this region, the transition from tropical to sub-tropical climates marks a climatic frontier that delimits the range of distribution of innumerable animal and plant species. The San Juan River that divides Nicaragua and Costa Rica - an important component of the drainage basin of the Nicaraguan depression or graven, which originated the system of the great lakes- became an insurmountable physical barrier for many groups of species making Nicaragua is the northernmost distribution limit for some species of the southern hemisphere (e.g. primates and marsupials), and likewise, the southernmost limit of many species of the northern hemisphere (e.g. Northern pine trees, coyotes and pumas).

203. This mosaic of climatic and topographic conditions described in the environmental context section creates a diversity of ecosystems that supports the nation's biodiversity and economy.

204. Based on WWF criteria[35], Nicaragua has 11 ecoregions, summarized in the following table

Table 13: Categorization of Nicaraguan Ecoregions *sensu* WWF

Tropical & Subtropical Moist Broadleaf Forests	*Tropical & Subtropical Dry Broadleaf Forests*
Cayos Miskitos-San Andrés and Providencia moist forests Central American Atlantic moist forests Central American montane forests Isthmian-Atlantic moist forests	Central American dry forests
Tropical & Subtropical Coniferous Forests	*Mangrove*
Central American pine-oak forests Miskito pine forests	Gulf of Fonseca mangroves Miskito-Nicaraguan Caribbean Coast mangroves Rio Negro-Rio San Sun mangroves Southern Dry Pacific Coast mangroves

Based on WWF criteria.

[35] WWF defines an eco-region as a large area of land or water that contains a geographically distinct assemblage of natural communities that (a) share a large majority of their species and ecological dynamics; (b) share similar environmental conditions, and; (c) interact ecologically in ways that are critical for their long-term persistence.

205. Since it is the geologically youngest territory of the Central American isthmus, Nicaragua shares many types of ecosystems with the rest of the Mesoamerican countries, such as the deciduous forests of the Pacific Region, shared with Mexico, Guatemala, Honduras and El Salvador. The ecosystems of the Northern Atlantic Region: *Pinus caribaea* pine forests, coastal lagoons, flooded pine savannas, as can be found in Honduras and Belize; the types of ecosystem of the Southern Atlantic Region and Rio San Juan are shared with Costa Rica and Panama[36]. However, there are ecosystems which are specific to the country, such as the two tectonic lakes Xolotlán and Cocibolca, the submarine prairies of the Caribbean, the coral mangroves of the Caribbean, the evergreen, seasonal, sub-montane pine forest, the *Pinus caribaea* populations of the Atlantic region and the crater lakes, whose specific climatic and ecological conditions provide them with endemic ichthyologic fauna. However, Nicaragua has the greatest uninterrupted extensions of tropical and subtropical moist and wet humid forests in the extended plains on the Atlantic slope of the country. The presence of the great lakes and other water bodies also provides habitat and refuge for many terrestrial and freshwater aquatic species, in addition to coastal bio-diversity on both Atlantic and Pacific coasts. Even though it is the country with the lowest average elevation over sea level, it still contains extended bags or patches of humid tropical lowland ecosystems in a good state of conservation, which have a very broad and still undetermined biodiversity.

206. Nicaragua is a key component of the Central American hotspot which covers all of Central America with the exception of Darien, south of the Panama Canal, Panama, which belongs to the Choco-Darien hotspot. The Central American hotspot occurs 8th amongst 25 hotspots recognized worldwide for species diversity. Regionally, this hotspot vies for first place on the list with the tropical Andes and Sundalan with 3 biomes and 22 ecoregions.. The Meso-american biological corridor, which extends from Mexico to the border between Panama and Colombia, occupies 1,155,000 km^2, or 0.77 percent of the planet. Of the total area of Mesoamerica, 231,000 km^2 (20%) percent remains as intact forest habitat. Of the intact forest, 138,437 km^2 (60 %), is located within protected areas, mainly as moist and wet tropical forests. Nicaragua's contribution to this hotspot is 21,110 km^2 in 24 protected areas (described below) in the Atlantic region, much of which remains forested.[37] Nicaragua is a key component of the Central American hotspot which covers all of Central America with the exception of Darien, south of the Panama Canal, Panama, which belongs to the Chocó Darién hotspot. The Central American hotspot occurs 8th amongst 25 hotspots recognized worldwide for species diversity. Regionally, this hotspot vies for first place on the list with the tropical Andes and Sundalan with 3 biomes and 22 eco-regions.

207. In terms of species diversity, the National Biodiversity Assessment lists a total of 1,800 species of vertebrates and approximately 14,000 invertebrates. Table 2 below demonstrates the present distribution of species by category. Nicaraguan biologists agree that the list is incomplete and the population estimates, distribution, and overall conservation status of many of the species has not been adequately determined within these specific ecosystems. The table also lists 21 endemic vertebrates that when combined with the vascular plants yields a total of 58

[36] State of Conservation of Nicaraguan Ecosystems MARENA-UNDP, Nicaragua; Meyrat A, 2001.
[37] Gillespie, T.W.; Nicholson, K.E.; McCrary, J. 2001. Patterns of vertebrate species richness and conservation in Nicaragua. Natural Areas Journal 21(2):159-167.

endemic species. All biologists agree that the list of endemic species is incomplete with very little work having been completed on the invertebrates[38].

208. The IUCN red book for Nicaragua lists 58 endangered and threatened plant and animal species[39]. However, the greatest majority of endemic vertebrates in Nicaragua are fishes.[40] Nicaragua's crater lakes (lagoons) constitute a system of isolated and very limited environments that supports many of these species. Within these ecosystems, the Midas cichlid complex is known to have speciated and it is highly likely that new species will be found. The entire group requires protection. Unfortunately, many of these species are not included on the IUCN red list.[41]. These omissions are due to the fact that Nicaraguan bio-diversity is still not documented in terms of frequency, distributions, and conservation requirements. Trade of endangered species is regulated through CITES. Within this framework, Appendix I lists 28 species: 12 mammals, 7 birds, 7 reptiles and 2 plants; Appendix II contained 218 species: 11 mammals, 100 birds, 8 reptiles, 2 amphibians, 1 arachnid, 1 gastropod, 27 anthozoan corals, 9 hydrozoan corals, and 57 plants, virtually all of them cactuses or orchids. The combined number of species on both lists was 244 species. No updated information is available. MARENA periodically updates and publishes national norms (bans or approved seasons for capture or kill) for select species (mammals, birds, reptiles, amphibians, fish, molluscs, and cetaceans or crustaceans?) in compliance with CITES.

Table 14: Species endemism and status per IUCN and CITES

Group	**Species in Nicaraguan**					**Species in Mesoamerica[42]**		
	Total	**Endemic[43]**	%	**UICN[44]**	**CITES[45]**	**Total**	**Endemic**	**%**
Amphibians	62	4	6.45	----	2	460	307	66.7
Reptiles	172	5	2.90	11	23	685	391	57.1
Birds	676	0*	0	14	116	1,193	251	21.0
Mammals	251	3	1.19	27	36	521	210	40.3
Fish	643	12**	1.86	----	----	----	----	----

[38] Zúñiga, T. Diversidad de Especies: Fauna. En: "Biodiversidad en Nicaragua. Un Estudio de País". 1999. Ministerio del Ambiente y Recursos Naturales, MARENA. Dirección General de Biodiversidad y Recursos Naturales – Programa Ambiental Nicaragua – Finlandia. 463 pp.

[39] Anonymous. 1996. Las especies del libro rojo. Naturaleza (Nicaragua) 7:12-21.

[40] UCA. 2002. Cuadernos de Investigación. Managua, Nicaragua. 47 pp.

[41] Weaver, P.L.; Lombardo, D.M. y J.C. Martínez – Sánchez. 2003. Biodiversity and Tropical Forest Conservation, Protection and Management in Nicaragua: Assessment and Recommendations. Final Report. 38 pp.

[42] Weaver, P.L.; Lombardo, D.M. y J.C. Martínez – Sánchez. 2003. Biodiversity and Tropical Forest Conservation, Protection and Management in Nicaragua: Assessment and Recommendations. Final Report. 38 pp.

[43] Zúñiga, T. Diversidad de Especies: Fauna. En: "Biodiversidad en Nicaragua. Un Estudio de País". 1999. Ministerio del Ambiente y Recursos Naturales, MARENA. Dirección General de Biodiversidad y Recursos Naturales – Programa Ambiental Nicaragua – Finlandia. 463 pp.

[44] Lista de Fauna de Importancia para la Conservación en Centroamérica y México: listas rojas, listas oficiales y especies en Apéndices CITES. 1999. Sistema de Integración Centroamericana. Dirección Ambiental, con el apoyo técnico de UICN – ORMA y WWF Centroamérica. San José, Costa Rica. 230 pp.

[45] Normas y procedimientos para la exportación e importación de especies de flora y fauna silvestres de Nicaragua. Decreto 8 – 98. MARENA. 17 pp.

Vascular plants	6,500	65	1	----	62	24,000	5,000	20.8
Totals	**8,304**	**89**		**52**	**239**	**26,859**	**6,159**	

Sources: Zuniga (1999); IUCN; CITES.

*There are no endemic bird species in the country. However the literature lists endemic sub-species, which are subject to confirmation.

**The original list of endemic species for Nicaragua included 12 species, up to 1982 when Villa found some inconsistencies in the literature and put in doubt the endemic status of some of these species

209. The most endangered species are the felines (*Felidae*), predators (*Falconiforms*), mammals of the tropical humid forest (*Didelphidae, Chiroptera, Dasypodidae, Mirmecophagidae*, etc.), forest birds (*Psittacidae, Trogonidae, Cracidae*, etc.), tree-dwelling amphibians (especially frogs *Hylobates sp*. and salamanders), turtles and sea corals. CITES protects some commercial plant species that are threatened, such as mahogany (*Swietenia sp*.) and cedar (*Cedrela spp*.), orchids of the humid forest (*Bromeliacae*), tropical black walnut (*Juglans sp*.), and all the American mangrove species. Little is known about the population sizes, distribution, or current status of these species within the country; this information, however, is critical for management.[46]

Supplemental Information on Ecosystem Representation.

210. There are 4 small ecosystems that are represented in their entirety. Those are: the Montane Evergreen Forest, The Moderately Drained Lowland Evergreen Forest, Caribbean Coral Mangrove Forests, the Perennial Grasslands on Organic Deposits, and the Lower Montane Evergreen Forest.

211. One important ecosystem, the deciduous broadleaf shrub forest, is not represented within SINAP A total of 7 important ecosystems have between 0.4 and 3% representation in the system.

- Deciduous shrub forests (0.4%), found in the south of Jinotega, North of Chagüitillo, Matagalpa and in the area between Boaco and Managua;
- Riverine evergreen forests (1.6%) and Evergreen gallery forests (1.8%) each in the North Atlantic Autonomous Region (RAAN);
- Savannah deciduous shrub forests (2.0%), known as "jicarales" or "sabanas matorralosas", located within sedimentary areas parallel to the coastal and lacustrine areas of the South Pacific and near the principal lagoons.
- Semi-deciduous lowland forest (2.3 %) within the southern mining triangle.
- The Evergreen Alluvial Forest (Dominated by Bamboo) (4.2%) along the rivers of the RAAN.

[46] Weaver, P.L.; Lombardo, D.M. y J.C. Martínez – Sánchez. 2003. Biodiversity and Tropical Forest Conservation, Protection and Management in Nicaragua: Assessment and Recommendations. Final Report. 38 pp.

- Different types of ecosystems belonging to the Caribbean Pine ecosystems within the RAAN are (3%) Evergreen Pine "bajura" forests (3.0%), the Wet Pine/Savannah (3.3%) and the Inundated Pine Savannah (4.9%).
- (2.1% of the tectonic lagoons are included within protected areas with one lagoon occupying most of that protected area (Tisma).

212. A total of 4 different ecosystems are included in a group with 6.0% to 13% protection. These are:

- The Semi-deciduous Swamp forest (6.0%).
- The mosaic of transitional coastal vegetation (6.7%) which is an ensemble of 3 ecosystems and a refuge for waterfowl and reproductive habitat for parrots and crocodiles.
- Semideciduous Gallery Forest (8.4%). These are areas important to wildlife but suffer extensive interventions and deterioration.
- Evergreen shrub (8.6%), a succession of ancient coffee stands located near the Datanlí-El Diablo PA and bordering the Apanás, Jinotega Dam.

Table 15: Representativity of Natural Ecosystems (53)*

# of Ecosystems	Representation	% of Ecosystem within PAs
9	Excellent	> 70%
8	Well Represented	40 to 69%.
10	Partially represented.	20 to 40%
16	Poorly represented	0 to 20%

Fuente: Meyrat, 2001

*Man-made ecosystems (15), such as irrigated environments, are not counted.

PART X: SOCIO-ECONOMIC CONTEXT SUPPLEMENTAL

The Nicaraguan Debt Situation

213. Since 1990 Nicaragua has embarked upon a number of structural adjustment programmes with International Financial Institutions (IFIs). After having been "off-track" according to the International Monetary Fund (IMF), Nicaragua reached a three–year agreement with the IMF entitled the Poverty Reduction and Growth Facility (PRGF). The agreement sets specific goals for economic growth, inflation, budget deficit, and international balance of payments. It also grants special priority to poverty reduction, including social sectors. By 2004, the Nicaraguan government displayed a strong commitment to the PRGF and successfully worked towards these macroeconomic indicators. However, a high domestic debt comprises a major part of the budget. Due to the increasing power struggle between the legislature and the executive branch, it was not possible to reach an IMF agreement for continued support. As a consequence disbursement from the IMF and the WB were stalled. Since January 2005, the national budgets have not fallen within the limits set by IMF guidelines.

214. As all countries in the region, Nicaragua suffered during the period of economic stagnation beginning in late 1998, and economic problems were compounded by both the decline in productivity following Hurricane Mitch and low prices for agricultural exports. The combination of an expanding population (almost 2.4% growth) and low productivity forced reductions in public spending between 2001 and 2003 of almost 10% to reduce an unsustainable fiscal deficit.[47] [48] Despite the reduction in public spending and low growth,[49] the expenditure to combat poverty remained virtually constant after a low in 1998.

Table 16: Macroeconomic Indicators. Nicaragua 2000-2004.

	2001	2002	2003	2004[a]	2005[b]
Real GNP growth	3.0%	1.0%	2.3%	4.2%	3.8%
Public sector deficit after donations (% of GDP)	-9.2%	-5.5%	-3.2%	-3.8%	-
Balance of payment deficit (% of GDP)	-24.1%	-19.6%	-17.9%	-15.8%	-17.6%

Source: Nicaraguan Central Bank homepage. IMF Country Report, January 2004, and Economic Intelligence Unit, Country Report, May 2005.

[a] Preliminary

[b] EIU Estimate. .

215. By January, 2004 Nicaragua reached the completion point for debt relief under the Highly Indebted Poor Country Initiative; indicating that foreign debt was reduced by 80%, from $6.4 billion U.S to $ 1.3 billion U.S. Although debt reduction, in theory, implies less pressure to purchase hard currency and consequently more local currency funds available for development, it does not necessarily increase the amount of Nicaraguan Cordobas available to the government

[47] The fiscal deficit before donations reached in 2002 16.5% of GNP. After donations it stood at 9.2%.

[48] To this must be added that in coming years it will became necessary to redirect government resources to the municipalities, as stipulated by the Municipal Transfers Act.

[49] IMF: Enhanced Initiative for HIPC. Completion Point Document, March 2004, page 36.

for development programmes. Historically, Nicaragua was defaulting on a large portion of their international debt and has been financing a large portion of their remaining debt with new loans. According to IMF projections, future debt servicing is likely to remain at some 80 to 90 million dollars per annum beyond 2006, as compared to an estimated 60 million in 2004 -2005.

216. By June, 2005, the G8 agreed to cancel all multilateral debt owed by the poorest developing countries, including Nicaragua. Although the actual amount involved is still not finalized, the environment sector has not been slated for additional support from national funds created through these new debt reduction mechanisms. Nicaragua is a beneficiary of the US Millennium Challenge Account for a total of $200 million U.S. which will significantly increase local investment. This however will not immediately lead to increases in public investment, which are declining for the period between 2006 and 2007. It is hoped that new productivity generated by the Millennium Challenge will eventually increase government revenues and later more funding for social and environmental development.

217. As part of the measures related to the Highly Indebted Poor Countries Initiative (HIPC), the government in late 1999 completed a Poverty Reduction Strategy (ERCERP) which was the basis for a Poverty Reduction and Growth Facility (PRGF) that was approved by the World Bank (WB) and the International Monetary Fund (IMF) in 2002. The ERCERP calls for the modernisation of the state, achieving greater equity by diminishing the gap between rich and poor, increasing transparency, accountability, and encouraging the participation of civil society. The environment is included in the ERCERP as one of its cross-cutting issues. A National Development Plan (PND) was approved in April, 2005. An operational document of the PND, entitled PND-O will substitute and become the framework document between donors and the GoN.

218. To implement the PND-O, productive "clusters" have been identified throughout the country. All public sector support to economic development will eventually conform to the priorities established to the nature of the clusters. Four of the eight sectors and sub-sectors ("clusters") prioritised by the government are based on the availability of natural resources and affect protected areas: tourism, fishing and shrimp farming, mining and forestry. It is therefore necessary to co-ordinate and harmonise criteria for the development of activities leading to the sustainable use of resources in these protected areas that generate income and mechanisms of economic sustainability for the local population and management of these areas.

219. The GoN is clearly on a pro-growth track prioritizing economic development at the national level. Nicaragua has entered into free trade agreements with Chile and Mexico and, in 2003, became a signatory to the Central American - Dominican Republic - USA Free Trade Agreement (CAFTA-DR). The environment is included in the ERCERP as one of its crosscutting issues. Agreements, such as CAFTA, however are weak on international environmental controls and oversight. Within CAFTA's framework, each country shall enforce its own legislation, but recognises that that capacity is limited. It also includes the caveat that each country has a right to prioritise its actions, but may not weaken or reduce the existing national standards for protection in order as a means to encourage trade. An Environmental Affairs Council has been created, which will oversee the implementation of the environmental chapter. In February 2005, an Environmental Cooperation Agreement (ECA) was signed between the US and Central America/DR. There is, however, no particular financial commitment by the US to financially support regional partners in the area of environment.

220. Nicaragua is also a beneficiary of the US Millennium Challenge Account for a total of $200 million U.S. which is intended to significantly increase local investment. This however will not immediately lead to increases in public investment, which are declining for the period between 2006 and 2007. It is hoped that new productivity generated by the Millennium Challenge will eventually increase government revenues and later more funding for social and environment development programmes. The Millennium Challenge Account will also spurn development within productive sectors. With implementation slated for the provinces of León y Chinandega, there are 2 key components aimed at stimulating rural businesses, especially agro-businesses ($30 M USD) and the development of private property rights ($26.5 M USD). The Millennium Challenge, which is further described in the baseline analysis, does have internal controls on support to persons or businesses living within protected areas, which will require management plans as a prerequisite for support to the private producers living within the protected areas.

Table 17: Estimated Economic activity within PAs

	%
Agroforestry/Coffee with Shade	0.34
Extensive livestock with 25-50% tree cover	4
Forests	35.74
Forests under production	44.72
Agro-livestock systems with 10-25% natural vegetation	2
Agro-livestock systems with 25-50% natural vegetation	5
Intensive Agro-livestock systems	1
Intensive Irrigated agriculture	0.001
Shrimp tanks or salt ponds	0.33
Not applicable/undetermined	7.75

Source: UNDP/GEF PDF-B study

Concessions Within PAs

221. MARENA and the Ministry of Industrial and Commercial Development (MIFIC) and/or MIFIC member agencies have developed bi-lateral agreements for the promotion of shrimp production, mining, and power. In accordance with executive decree 45-93, MARENA regulates permits and evaluates environmental impacts for all investments, while MIFIC charges for the environmental service. MARENA also has a cooperative agreement with INTUR with respect to tourism in PAs. The following summarize Concessions for commercial activities:

- The Aquaculture concessions are found in Estero Padre Ramos and Estero Real located within the Pacific Region. These concessions are delivered by the National Fish and Aquaculture Administration (ADPESCA), which is registered within MIFIC. In total there are over 133 concessions covering an extension of 21,826 Ha.

- Mining concessions are granted by the National Geologic Resources Administration (ADGEO) who is a member of MIFIC. There have been a total of 111 concessions for mining claims of which 62 are for metallic exploitation and 49 for non-metallic exploitation for a total of 728,397 Ha. These concessions have affected 17 protected areas with a surface area of 39,032 Ha. which is the equivalent of 5.40 % of claims.
- The identification of geo-thermal, hydro-electric, and wind is permitted by Executive Decree 79-2003 under the condition that clean development Technologies are applied and that impacts on the environment are minimal. At the present time, 5 PAs are under geo-thermal development: Volcán Cosigüina, la Isla de Ometepe, Volcán Telica – El Ñajo, El Hoyo Monte Galán y Chiltepe. One new area, Dipilto-Jalapa is under negotiation and is one of the model PAs for this project.
- Hydro-electric power and domestic water service concessions are regulated by ADAGUAS and are generated in numerous PAs. The largest hydro-electric production is located within the BOSAWAS Biosphere Reserve with 5 small power generating stations located within the nucleus and the buffer zone of the reserve. One of the model PAs for this project, Dipilto-Jalapa will work closely with the water delivery contractors to create sustainable relationships to benefit the PA from which resources are drawn.

Table 18: Shrimp Concessions by Protected Area (#'s).

Type	PADRE RAMOS		ESTERO REAL		TOTAL	
	#	%	#	%	#	%
Persons	1	4	9	8	10	8
Businesses	3	14	49	44	52	39
Cooperatives	18	82	53	48	71	53
TOTAL	22	(17 %)	111	(83)	133	100

Source: ADPESCA-MIFIC, 2005.

Table 19: Extension of Shrimp Concessions by Protected Area (Ha.)

RAZON SOCIAL	PADRE RAMOS		ESTERO REAL		TOTAL	
	Has.	%	Has.	%	Has.	%
Persons	20	3	711.99	97	731.99	100
Businesses	237.52	2	14461.96	98	14699.48	100
Cooperatives	1198.97	19	5196.55	81	6395.52	100
TOTAL	1456.49	6	20618.00	94	21826.99	100

Source: ADPESCA-MIFIC, 2005.

222. DGAP is not involved with the fiscal aspects of concessions nor do they, or SINAP, receive retribution for extraction of natural resources in the form of goods or services (see barriers). Their role is limited to assuring that the PA has management plans and that the projected concession is within the scope of that plan. Management plans must be developed by the owners of the land in accordance with DGAP specifications.

223. The GoN is clearly operating within a pro-growth strategy at the national level that will surely increase or expand the economic activities and livelihoods at the local level, and ergo,

within PAs. Since the majority of the PAs are on private property with the aforementioned commercial activities, we can expect future and additional pressures on DGAP to balance between conservation of national and global benefits and economic development at the local level.

Table 20: Agencies with Concession Rights

Shrimp Production	National Fish and Aquaculture Administration (ADPESCA)
Geothermal Exploration and Production	National Geologic Resources Administration (ADGEO)
Water	Water Administration Board ADAGUAS
Forestry	National Forestry Institute (INAFOR)
Tourism	National Tourism Institute (INTUR)
Coordination	Ministry of Industrial and Commercial Development (MIFIC)

Tourism Potential and Linkages with PAs

224. Of the 76 Protected Areas, only 17 are being used for tourism with only 12 listed with installations, meaning personnel, budget, and a sufficient institutional presence to adequately receive and cater to tourists. Of these, only 6 are being exploited for international tourist potential as indicated in table 20 by region. The tourism market is an expanding market with as yet unmeasured potential for generating income for SINAP. The tourist sector in general is the most rapidly expanding in the nation, reaching approximately 12% of GDP, which now exceeds traditional agro-exports. In 2005, the number of visitors reached 521,000 generating an estimated 151 Million USD. By the year 2008, that number could reach 800,000 tourists generating 350 Million USD. Only the Institute of Tourism is authorized to collect fees from airports and tourism (see institutional context and baseline analysis). This, combined with other legal obstacles, limit the ability of DGAP to capture revenues from this industry at the present time.

225. At the present time, only the Masaya and Mombacho Volcanos have a superior level of tourist development, infrastructure, and self-sustainability. The DGAP has also identified the National Landscapes Miraflor Moropotente and Tiscapa, the Natural Reserve Cerro Apante, and Datanlí El Diablo with tourist potential.

Table 21: Distribution of Protected Areas with Tourism Potential by Region

Pacifico	**Central**	**Atlantico**
PN Volcán Masaya*†, RN Lagunas de Apoyo RN Laguna de Xiloá, RN La Isla de Ometepe* (Volcán Maderas y Volcán Concepción),	RN Cerro El Arenal. RN Miraflor†. RN Tisey-La Estanzuela†.	MN Archipiélago de Solentiname*. RVS Los Guatuzos*. MH Fortaleza La Inmaculada*†. RB. Indio Maíz.(Rio San

RN Chocoyero-El Brujo†, RN Volcán Mombacho*, RN Estero Padre Ramos†, RN Isla Juan Venado†, RVS Chacocente† RVS La Flor. RN Cerro Musun†		Juan†) RB Bosawas

(NP) National Park, (RN) Natural Reserve, (RVS) Wildlife Reserve, (MH) Historic Monument
*Indicates international tourism
†Indicates DGAP identified as a priority for establishment of minimun facilities for tourism[50].
Source: DGAP, Programa De Monitoreo De La Efectividad Del Manejo De Áreas Protegidas

226. Since 1990, Nicaragua has been developing its tourism sector, which, in the last 5 years, has been an increasing focus on a more" sustainable tourism" with the aim to increase competitiveness on a regional and international level. Nicaragua is in the process of establishing it's Satellite Account; an initiative by the World Tourism Organization which provides methodologies, criteria and definitions for governments to measure the impact of tourism on the national economy. Although there are still unknowns about the impact of tourism in the region, the information available forms a baseline for strategic decision making for the development of more sustainable tourism to become a vehicle for poverty alleviation and a source of income for the protection of Nicaragua's cultural and natural patrimony[51].

227. The World Tourism Organization estimates the income generated through international tourism in Central America (2004) at 9.300 Million US$, a 13% rise from 2003 (as expressed in national currencies at a fixed exchange rate). The greater part of these income benefits are shared mostly by three large players in this market; Costa Rica (35%), Guatemala (20%) and Panama (17%). Nicaragua's share of this market is considerably more humble with an estimated 700,000 tourists. Yet internally the revenue generated by the sector is not to be downplayed, as it plays a sizeable role in the national accounts. In 2003, as the coffee prices experienced a low point, tourism was the main source of income for Nicaragua.[52] However, tourism in Central America is now on an upward trend. In 2004 alone, the number of tourists visiting the region increased by almost 17%. The Central American Sub-region was the only region in the Americas which managed to increase visitor numbers in the difficult years 2001-2002 when the effects of the 9-11 attacks could be felt strongly across the tourism sector globally. During this period, tourist arrivals in Central America grew by 8,4%.[53]

228. Nicaragua has consistently noted the strongest increase in visitors within the Central American region over the past 10 years. WTO estimates that an increase in visitors from 36,279 in 1989, to 112,278 in 2000, and 712,444 in 2005. Yet there are still a number of issues to resolve, for this small market to grow into a strong sector benefiting the population and environment. Some of these are briefly described below. Measured by the regional average, the actual amount tourists spend per day in Nicaragua is comparatively low, which although

[50] Cite the National Monitoring survey for 2006
[51] According to WTO preliminary input for CCA
[52] Source: Carl Bro, CBA Sector-wide Study on Tourism on the Atlantic Coast, 2004

[53] Source: World Tourism Organisation

indicating a comparative advantage, also indicates an opportunity to increase the tourism revenues by, amongst other things, increasing the number of attractions. Tour operators and service providers are still limited in quantity and quality and there is little variety. While other countries in the region are relatively easy to visit, Nicaragua still has accessibility problems to foreign markets. Additionally, a GTZ-FODESTUR study in 2000 demonstrated Nicaragua still carries the negative connotation with several European operators associated with poverty, political instability and revolution.

229. Yet ecotourism is also Nicaragua's main attraction. A CEURA study in July 2002 revealed that 32% of tourists indicated it to be their main reason for coming to the country. This indicates that there is a definite opportunity for Nicaragua's protected areas to play a key role in the tourism sector and capture a percentage of the increasing revenues within the sector, should the qualifying conditions exist. As mentioned, PAs are visited by tourists but have a minimal level of investment and services outside of the Masaya and Mombacho volcanos.

230. MARENA and INTUR have adopted an inter-institutional agreement in February 2000, in response to the need for coordination of both institutions activities. The agreement is aimed towards the development of "Sustainable Tourism" in protected areas. Yet the convention promotes coordination only on the Central level, and not all the activities of the agreement are being implemented for technical reasons, such as a lack of human resources. The key elements of the agreement are:

- Identify and prioritize PAs where tourism is to be promoted, defining the areas within them that will be designated for these purposes.
- Promote and coordinate environmental and socio-economic impact evaluations for the tourist activities to be developed in PAs.
- Provide the management and regulatory frameworks for each protected area as well as other information necessary for the design of management and tourism development plans.
- Assist in the development of the management plans for the prioritized PAs for tourist development
- Assist and supervise the task of monitoring the sound management of the PAs in which tourism takes place.
- Document and publish encouraging and positive experiences of tourism in prioritized PAs to replicate the practices.
- Promote a strategy of generation and administration of financial resources which contemplates the investment of part of the funds generated by tourism in the PAs into conservation policies and social programmes for the communities.

231. Tourism is regulated by the National Institute of Tourism (INTUR) who has the exclusive authority to charge fees for tourism concessions. Only INTUR is authorized to collect fees from airports and from tourism activities. This, combined with other legal obstacles, limit the ability of DGAP to capture revenues from this industry at the present time

PART XI: DETAILED DESCRIPTION OF SINAP

Overview of SINAP

232. To conserve the country's biodiversity, approximately 18.2% of Nicaraguan territory, corresponding to 2,242,193 hectares[3], is categorized as protected within a national protected areas system (SINAP). The first protected area, the Cosigüina Peninsula[54] was created in 1958 to protect wildlife from the effects of livestock. It was not until 1971 until the second protected area is declared, which is the Saslaya National Park, located in the North Atlantic Autonomous Region (RAAN). These areas followed the "Park" concept implying areas that are protected and free from human intervention and dedicated to the conservation of habitats where activities such as hunting, fishing, and forestry are prohibited. By 1979 the third area, the Masaya Volcano National Park was designated and considered as a Pilot Park and model interpretive centre for the entire Central American region. Between 1980 and 1991, the number of protected areas increased by 54 areas under various categories of management through executive decrees.

233. In 1984, The National Protected Areas System (SINAP) was created to consolidate the protected areas in the Pacific, Central, and Atlantic regions. By 1987, the body, formerly known as the National Park Service, modified their strategy and dedicated themselves to the formulation of integrated management projects and financing through external donations. Amongst the projects funded at that time were: Pikin Guerrero, OLAFO Manglares, Estero Real, Cordillera de los Maribios (FAO), and macro-projects such as Cayos Miskitos y BOSAWAS. Following the consolidation of MARENA in 1994, the General Directorate for Protected Areas was formed as part of the Nicaraguan Environmental Action Plan in response to the IV World Congress of National Parks and Protected Areas.

234. SINAP is now comprised of 76 areas classified in eight management categories. . In addition to these, an additional 42 Private Natural Reserves and 8 Municipal Ecological Parks have been declared within the last 5 years. In terms of regional distribution, these protected areas are divided almost equally in number between the Pacific, Central, and Atlantic regions. In terms of extension, the Pacific and Central regions have smaller and more fragmented PAs that the Atlantic (Caribbean) region as seen in table 3 below. These protected areas range from very small units of 40 ha to the BOSAWAS biosphere reserve with over 1,000,000 ha. including the core and buffer zone areas.

235. Two UNESCO biosphere reserves are located within the Atlantic region of the country. The BOSAWAS reserve and The Rio San Juan- Nicaragua. The former is shared with the Government of Honduras and is the site of a GEF-WB international initiative. The latter is located on the border with Costa Rica. The groups of protected areas that currently have more stable environments, are located in the Atlantic (Caribbean) region. These have more intact ecosystems, and a more substantial level of investment. However, these areas still have financial gaps (see barriers) and are mostly financed by donor driven projects with target dates for completion. Although the biosphere reserves do not contain the greatest number of PAs, they cover 70% of the surface area of SINAP.

[3]Protected Areas National Report, 2003

[54] Designada como Zona de Refugio para la Vida Silvestre, a través del Decreto No.13 de 1958.

236. The biological corridors of Nicaragua were identified and described based on: extension of areas of key biodiversity, existence of intact biota, need for ample landscape by species with wide ranges, connectivity of habitat and opportunities for maintaining ecologic and evolutionary processes. The following corridors were identified:

- The Gulf of Fonseca Biological Corridor: This is a tri-national corridor with an extension of 437,084 Ha., with 37% in Nicaragua, 32% in El Salvador, and 31% in Honduras. The components of this corridor are 4 PAs in Nicaragua (VolcanCosigüina, Estero Padre Ramos, Volcan San Cristobal, and Estero Real) 13 in El Salvador, and 10 PAs in Honduras. The objective at the regional level is the conservation and socio-economic perspectives of the local population.[55]
- The San Juan-La Selva is a bi-national corridor with an extension of 1,100,000 Ha of which 78% are found in Nicaragua and 22% in Costa Rica. The components of this corridor are 3 PAs in Nicaragua (Indio-Maiz, Punta Gorda, and Cerro Silva) and 3 PAs in Costa Rica (La Selva, Barra Colorado, and Tortuguero). The objective at the bi-national level is habitat conservation necessary to protect and increase habitat for the Great Green Macaw (*Ara ambigua*), Jaguar (*Panthera onca*) and Manatee (*Trichechus manatus*)[56].

237. In addition there are a total of 9 RAMSAR sites located within PAs and 2 sites outside of SINAP. Included within the system are: Wildlife Refuge Los Guatuzos Wetland, Estero Real Delta Natural Reserve, Río San Juan Wildlife Refuge, Mískitos Cays Biologic Reserve, Cerro Silva Natural Reserve (Wetlands portion) and the Tisma Lagoon Natural Reserve. The following RAMSAR sites are not located within protected areas: The Lago de Apanas – Asturias, Llanos de Apacunca, and the San Miguelito Wetland System. This is to detailed info for this section.

Table 22: Distribution of Protected Areas by Region.

Region	# of PAs	% of total	Size (Ha.)	% of total extension
Pacífico	26	34.2	168,371	7.5
Central	25	32.8	150,955	6.7
Caribe	25	32.8	1,922,865	85.7

Source: Informe Nacional Áreas Protegidas, 2006

Table 23: SINAP Management Instruments

Situation	Quantity	%
Protected Areas stated to this date	76	100
Protected Areas with approved management plans	15	20
Protected Areas with management plans in process of elaboration	25	33
Protected Areas with Annual Operations Plans	36	47
Protected Areas with Financial Plans	5	6

[55] Corrales, Lenin. Corredor Biológico Golfo de Fonseca Regional. PROARCAS/COSTAS, 2001.
[56] Ficha Técnica del Corredor Biológico San Juan-La Selva. CBM, 2002.

Protected Areas under co-management	6	8
Protected Areas with international recognition	11	14

Table 24: PAs under co-management arrangements

N°	Protected Area	Co-manager	Date of agreement
1	RN Volcán Cosigüina,	LIDER	16/11/01
2	RN Estero Padre Ramos,	Asociación Somos Ecologistas en Lucha por la Vida y el Ambiente (SELVA)	25/04/01
3	RN Isla Juan Venado,	Delegación Territorial MARENA León (temporalmente)	06/04/01
4	RN Tisey Estanzuela,	Fundación de Investigación y Desarrollo Rural (FIDER)	08/06/01
5	RN Cerro Musún,	Fundación Nicaragüense para el Desarrollo Sostenible (FUNDENIC-SOS)	15/06/01
6	RN Chocoyero El Brujo,	Cooperativa Juan Ramón Rodríguez	2005
7	RVS La Flor,	Fundación Cocibolca	12/02/99
8	RN Volcán Mombacho.	Fundación Cocibolca	19/11/96
9	RN Volcán Maderas.	ASAAN	28/02/02

Table 25: SINAP Management Categories

Management Categories	Description	# of PA´s	Size (Ha.)	%
Biologic Reserve	Extensive areas with unaffected representative eco-regions and ecosystems, geological and physiographical characteristics, and/or species of great scientific and representative value, mainly dedicated to scientific research and/or ecological monitoring.	2	313,980	10.34
National Park	Terrestrial and/or marine area, with low intervention and suitable for the protection of ecological integrity of one or more ecosystems and singular and representative habitats and places and characteristics of socio cultural interest.	3	25,327	0.83
National Monument	Area containing natural or cultural-historical characteristics of great or exceptional value for its inherent richness, aesthetic or representatives qualities.	2	20,588	0.68
Historic Monument	Territories containing one or several cultural, historical or archaeological characteristics of national or international relevance, related to natural areas.	1	375	0.02
Wildlife Refugee	Terrestrial and/or marine area with active intervention to guarantee the maintenance of habitats and/or to satisfy the needs of determinate species or animal communities residents or migratory of national or international relevance, unique, rare, protected or endangered.	5	96,950	3.19
Genetic Resources Reserve	Terrestrial and/or marine area to protect some Nicaraguan wildlife species due to their genetic resources quality, which are of national interest and may be used for genetic improvement programs of flora and fauna of comestible or economic interest.	2	6,226	0.20
Natural Reserve	Land surface and/or marine-coastal or lacustrine areas conserved or with intervention, containing flora and/or fauna species of special interest which generate environmental benefits. Forest reserves are under this category.	59	1,005,825	33.12
Terrestrial and/or marine protected landscape	Land, coast or sea surfaces where human being and nature interactions through time had produced a zone defined for cultural practices, with important esthetical, ecological and/or cultural values, often lodging a rich biological diversity which protection, maintenance and evolution requires the safeguarding of this traditional interaction.	0	0	0
Biosphere Reserve	Terrestrial and/or marine areas with high and diverse values of natural and cultural biodiversity of national and international relevance, integrating different management categories, administrated in an integral way to achieve a sustainable development.	2	1,567,710	51.62

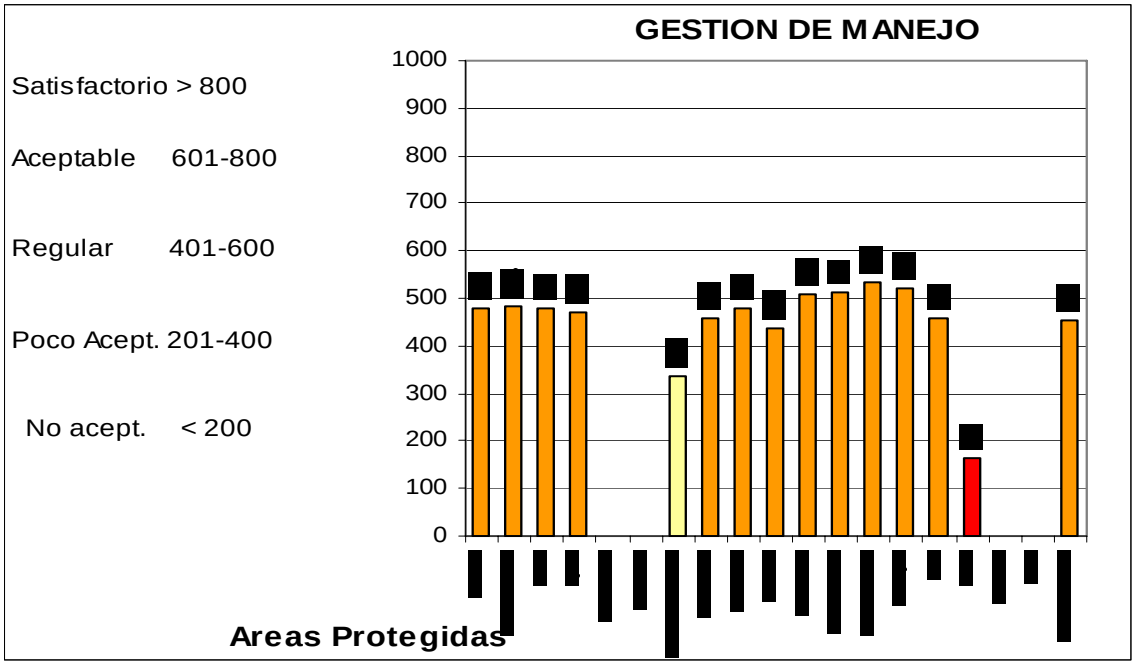
Source: Sánchez, Martha Lucía. Capítulo 10: Áreas Naturales Protegidas en Estudio de País: Biodiversidad de Nicaragua, 1999.

Table 26: Indicators (37) for management effectiveness from 16 PAs*

Social: 3 Indicators. ▪ *Communications Plan* ▪ *Stakeholder participation* ▪ *Environmental Education Plan*	Legal/Political: 3 indicators ▪ *Application of Laws within PA* ▪ *Administrative Autonomy of PA* ▪ *Inter-organizational relationships.*
Natural/Cultural Resources: 10 indicators ▪ *Compatible and Incompatible uses of PA* ▪ *Impacts from exploitation of Nat. Res.* ▪ *PA enforcement plan* ▪ *Impact of enforcement* ▪ *PA delineated* ▪ *Investigations programme* ▪ *Regulations and follow-up to investigations* ▪ *Systematized information* ▪ *Indicator species* ▪ *Connectivity*	Economic-Financial: 5 indicators ▪ *Long-term financial plan* ▪ *Availability of funds* ▪ *Env. Goods and services identified and valued* ▪ *Stakeholder recognition of goods and services* ▪ *Direct benefits to stakeholders from PAs*
Administrative: 16 Indicators ▪ *Land tenancy determined* ▪ *Visitor Satisfaction* ▪ *Internal Access for the PA* ▪ *Equipment for PA management* ▪ *Installations for PA management* ▪ *Maintennance of major plant/equipment* Signage Personnel necessary for management	▪ Quantity of trained personnel ▪ Employee Satisfaction ▪ Volunteer program ▪ Management plan under implementation ▪ Annual operations plan ▪ PA zoning ▪ Threat Analysis

Source: TNC/PROARCA

Chart 2: Level of Management Efficiency for 15 PAs (2005).



(*) Amongst these were receiving support of the POSAF-AP II project (5 PAs), the PRODEP project, both DGAP and the Executive Secretariat of the Biosphere Reserve Rio San Juan (4 PAs), and an additional 9 PAs receiving support under the COMAP project

SINAP financing

238. The following table shows the public investment per year to the different sectors of the government that are the principal actors in economic development and environmental controls. These are the agricultural and forestry related sectors of the government such as: the Institute for Rural Development (IDR), the Ministry of Agriculture and Forestry (MAGFOR); the Institute of Agricultural and Fishing Technology (INTA); the National Forestry Institute (INAFOR), MARENA, and MARENA's General Protected Areas Directorate. The chart demonstrates a steady decline in MARENA's budget in comparison to other government agencies. IDR and MAGFOR have benefited from the Millennium Challenge account in 2006.

Table 27: Public investment by sector

PUBLIC INVESTMENT	2002	2003	2004	2005
Millions of US Dollars				
MAGFOR	11,84	13,88	14,96	15,03
INTA	4,97	5,53	2,9	5,23
INAFOR	0,41	0,46	0,3	0,3

IDR	30,56	23,44	24,5	30,5
MARENA	26,55	26,87	26,5	18,56
General Protected Areas Directorate	4.92	4.61	4.30	3.59
Media Exchange Rate Cordobas per US$ 1.00	14.26	15.13	15.94	16.7

239. MARENA's overall budget is, however, highly dependent on foreign sources. The following table demonstrates the percentages of MARENA's budget that are derived from National and Foreign sources as illustrated in Table 12.

Table 28: MARENA Expenditures, 1993-2005 by Source (In Millions USD).

YEAR	GENERAL BUDGET	SOURCES					
		National Funding			External Funding		
					Capital expenses		
		Recurrent Expenses	Capital Expenses	Total National Funding	Loans	Donations	Total External Funding
1993	19.9	2.7	4.2	6.9	1.0	12.0	13.0
1994	16.1	2.0	2.7	4.7	0.0	11.4	11.4
1995	15.1	1.8	2.3	4.1	1.8	9.2	11.0
1996	9.4	1.4	1.4	2.8	2.2	4.4	6.6
1997	11.5	1.2	1.5	2.7	2.2	6.6	8.8
1998	12.6	1.2	1.3	2.5	2.3	9.0	11.3
1999	9.8	1.2	1.4	2.6	3.2	4.0	7.2
2000	17.8	1.3	1.9	3.2	4.4	10.2	14.6
2001	17.2	1.4	1.9	3.3	2.8	10.9	13.7
2002	10.4	1.3	1.8	3.1	1.0	6.0	7.0
2003	14.8	1.4	1.5	2.9	5.6	6.3	11.9
2004	9.4	1.2	1.4	2.6	2.6	4.1	6.7
2005	9.7	1.5	1.4	2.9	2.8	4.0	6.8

Source: MARENA, on basis of Annual National Budget Laws 1993-2005.

240. Treasury funds are delivered to MARENA in the form of "Recurrent Expenses." The second column, entitled "Capital Expenses" are also treasury funds that are provided as in-cash counterpart funding to donor driven development projects, listed as "Donations." Although the Capital Expenses are national funds, they are contingent on donations. Foreign contributions are based on Credits (loans) and on Donor-driven projects or "Donations." The importance of donor-driven activities is extremely important to MARENA. These donations are now in decline and will continue to decline through 2008. However, the reduction in donations has not diminished significantly the national contribution towards Capital Expenses, which continue to hover around the 1.4 M USD benchmark. With the recurrent expenses remaining around the 1.5 M USD treasury disbursements to MARENA have remained around the 3.0 M USD mark since the year 2000, indicating that the Nicaraguan government has made an attempt to maintain their level of funding through very challenging times.

241. This situation is also influenced by a structural shift away from donations and towards a higher share of public investments derived from international loans, resulting in higher external debts. In 2003 donations made up 53% of overseas funding with 47% in the form of loans. By 2005 this balance shifted to 40% donations and 60% loans.

242. MARENA generates a limited amount of funds internally, which are derived from fines for environmental damages and from The General Protected Areas Directorate, mostly generated from the Masaya National Volcano. This is an obscure category of funding entitled, "Targeted Income" or "Rentas Con Destino Especifico" in the Spanish language. In comparison to other agencies with commercial concerns, MARENA is lagging far behind with only 1% of the total budget being internally generated. However, this is not to say that income is not derived in areas under MARENA's influence. Many concessions for Mining, Shrimp Production, Forestry, and Agricultural Concerns are generated within Protected Areas under MARENA's mandate. MARENA is, however, not entitled to the concession. In these cases, the concessions are directed through the regulating sector that authorizes the concession. Table 13 demonstrates the relative percentage of internally generated funding by competing sectors.

Table 29: Per cent of Internal "Targeted Income" by Institution

Institution	Total (in Cordobas)	% of Total
MINSA	130,185,000	25
MIFIC	14,300,000	3
MAGFOR	55,195,203	11
INETER	11,131,997	2
MARENA	4,497,000	1

Source: MHCP, Law 569-2006

243. In spite of a challenging economic situation, the Nicaraguan government has managed to maintain at least a baseline level of funding to both MARENA and to the Protected Areas Directorate. As Chart 1 demonstrates, there is a decrease in funding to MARENA as a percentage of the national budget since 1997. Likewise, MARENA has tried to maintain the baseline level of funding for the General Protected Areas Directorate (DGAP). Like MARENA, the baseline funding is on a slight decrease and susceptible to the effects of inflation and to declining international donations. Fluctuations in DGAP funding levels indicate the volatility of financing as different projects are concluded. As witnessed in table 14, during the period of 2002 to 2005, investments declined from $2.20 US/Ha. of protected area to $1.60 USD/Ha[57]. This decline is attributed entirely to changes in levels of external financing. With such a small percentage of internally generated funding, neither MARENA nor DGAP are on pace to have sustainable funding strategies for protected areas in place by 2008, as agreed upon by the parties to the Convention on Biological Diversity in 2004.

244. When evaluated on a per hectare basis, also demonstrated in table 14, Nicaragua is the Central American nation with the least amount of funding available for maintenance of their PA system after El Salvador.

[57] Cite Sandra Tijerino, UNDP-GEF PDF-B consultancy/study.

Table 30: Per Hectare Expenditures by Central American Countries

DESCRIPTION	Belize	Guatemala	El Salvador	Honduras	Nicaragua	Costa Rica	Panama
EXENTION UNDER CONSERVATION **(HAS)**	800,000	3,357,153	22,000	2,300,000	2,242,193	1,288,834	1,900,000
PERCENTAGE OF TERRITORY COVERED BY PROTECTED AREAS **(%)**	45%	32%	1%	21%	18.2%	25%	25%
AVERAGE BUDGET OF PROTECTED AREA SISTEM OVER THE LAST 5 YEARS **(THOUSANDS OF DOLLARS)**	3,200	15,034	2,224	24,211	4,071	13,594	6,761
US $ PER HA OF PROTECTED AREA ASSIGNED BY THE BUDGET	4.0	4.48	1.01	10.53	1.8	10.55	3.52

Source: TNC, 2006

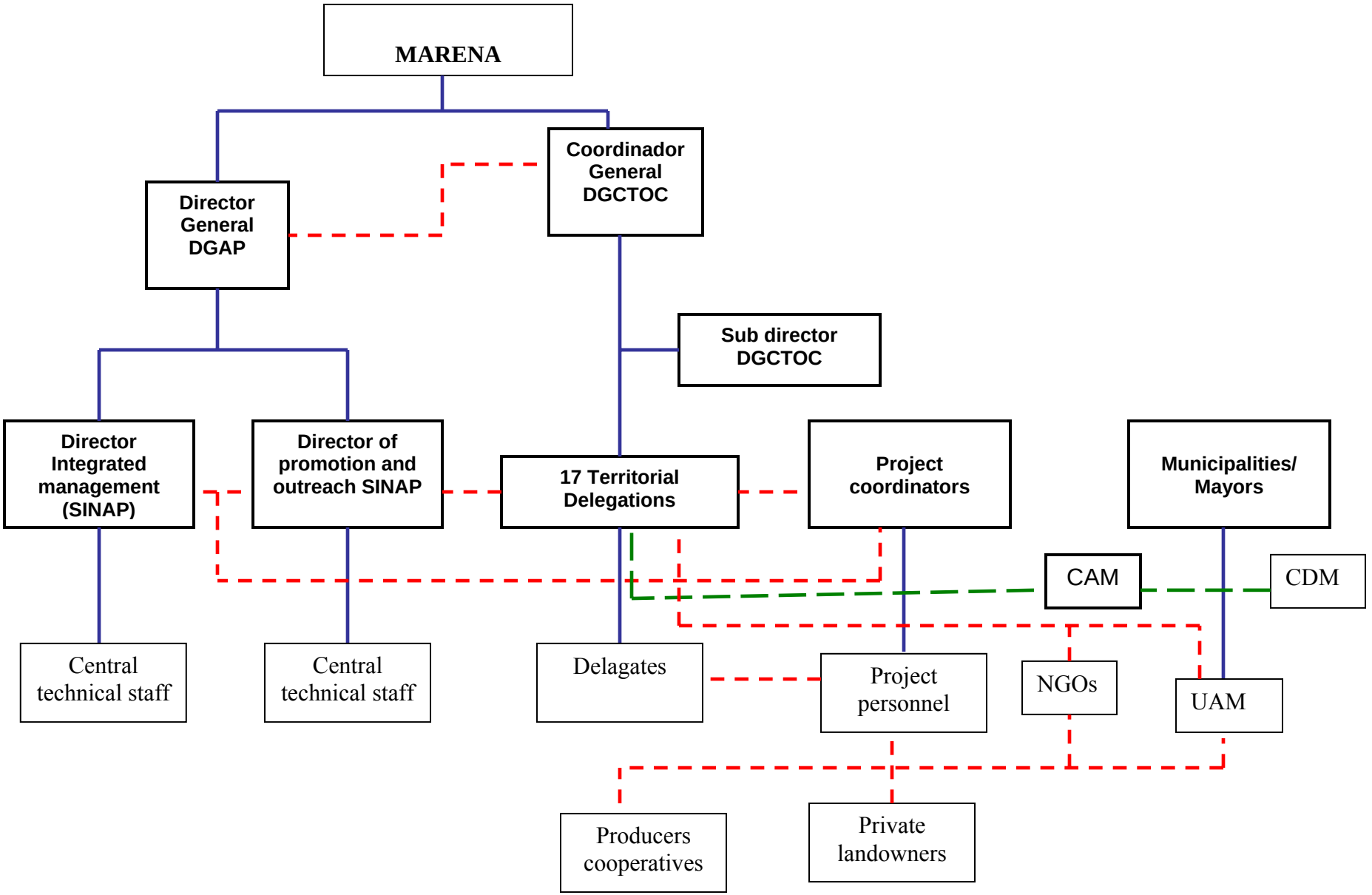
PART XII: INTERVENTIONS OF PROJECT IN PA´S.

Table 31: Site-Level Project Intervention Targets

	Intervention by Outcome and by output			
PA	1	2	3	4
1. Datanlí-El Diablo (Area of direct intervention with GEF funds)	1.1 Detailed values for ecosystem services will be estimated	2.2 Productive conversion through agroforestry systems.	3.4 Management plan is updated and improved 3.4 Business plan is completed and improved 3.5 Financial system at site-level is developed	
2. Dipilto-Jalapa (Area of direct intervention with GEF funds)	1.1 Detailed values for ecosystem services will be estimated		3.4 Management plan is updated and improved 3.4 Business plan is completed and improved 3.5 Financial system at site-level is developed	
3. Estero Padre Ramos (Area of direct intervention with GEF funds)	1.1 Detailed values for ecosystem services will be estimated		3.4 Management plan is updated and improved 3.4 Business plan is completed and improved 3.5 Financial system at site-level is developed	
4. Pilas-El Hoyo (Area of direct intervention with GEF funds)	1.1 Detailed values for ecosystem services will be estimated		3.4 Management plan is completely formulated 3.4 Business plan is completed and improved 3.5 Financial system at site-level is developed	
5. Cerro Musún (Intervention to be paid by IDR funds)		2.2 Productive conversión through agroforestry systems.		
6. Kilambé (Intervention to be paid by IDR funds)		2.2 Productive conversión through agroforestry systems. 2.2 Development of certification schemes for environmentally products for increase in conservation and ad valorem		
7. Tisey-Estanzuela (Intervention to be paid by IDR funds)		2.2 Productive conversión through agroforestry systems. 2.2 Develop-ment of certification schemes for environmentally products for		

	Intervention by Outcome and by output			
PA	1	2	3	4
		increase in conservation and ad valorem		
8. Tomabú (Intervention to be paid by IDR funds)		2.2 Productive conversion through agroforestry systems.		
		2.2 Development of certification schemes for environmentally products for increase in conservation and ad valorem		
9. Quiabuc (Intervention to be paid by IDR funds)		2.2 Productive conversion through agroforestry systems.		
10. Cosigüina (Intervention to be paid by IDR funds)		2.2 Productive conversion through agroforestry systems.		
11. Tisma (Intervention to be paid by IDR funds)		2.2 Development of certification schemes for environmentally products for increase in conservation and ad valorem		
		2.2 Development of sustainable forestry operations.		
12. Estero Real (Intervention to be paid by IDR funds)		2.2 Development of improved fishing practices		
13. Isla Juan Venado (Intervention to be paid by IDR funds)		2.2 Development of improved fishing practices		
14. Volcán Mombacho (Intervention to be paid by IDR funds)		2.2 Development of sustainable forestry operations.		
Other protected areas to be defined by PASMA (15)	1.1 Detailed values for ecosystem services will be estimated			

PART XIII: DRAFT ORGANIZATIONAL CHARTS OF CONTACT AND COMMUNICATION



UAM= Municipal Environmental Units ; CAM = Municipal Envioronment Commission; CDM= Municipal Development Committee

The above chart demonstrates a posible governance structure with the municipalities as an important link between producers and private land owners. The hierarchy at MARENA is under revision at this time and will change by the inception phase of the project. The organizational chart is a starting point that will be the subject of adaptation, confirmation, and implementation during the project.

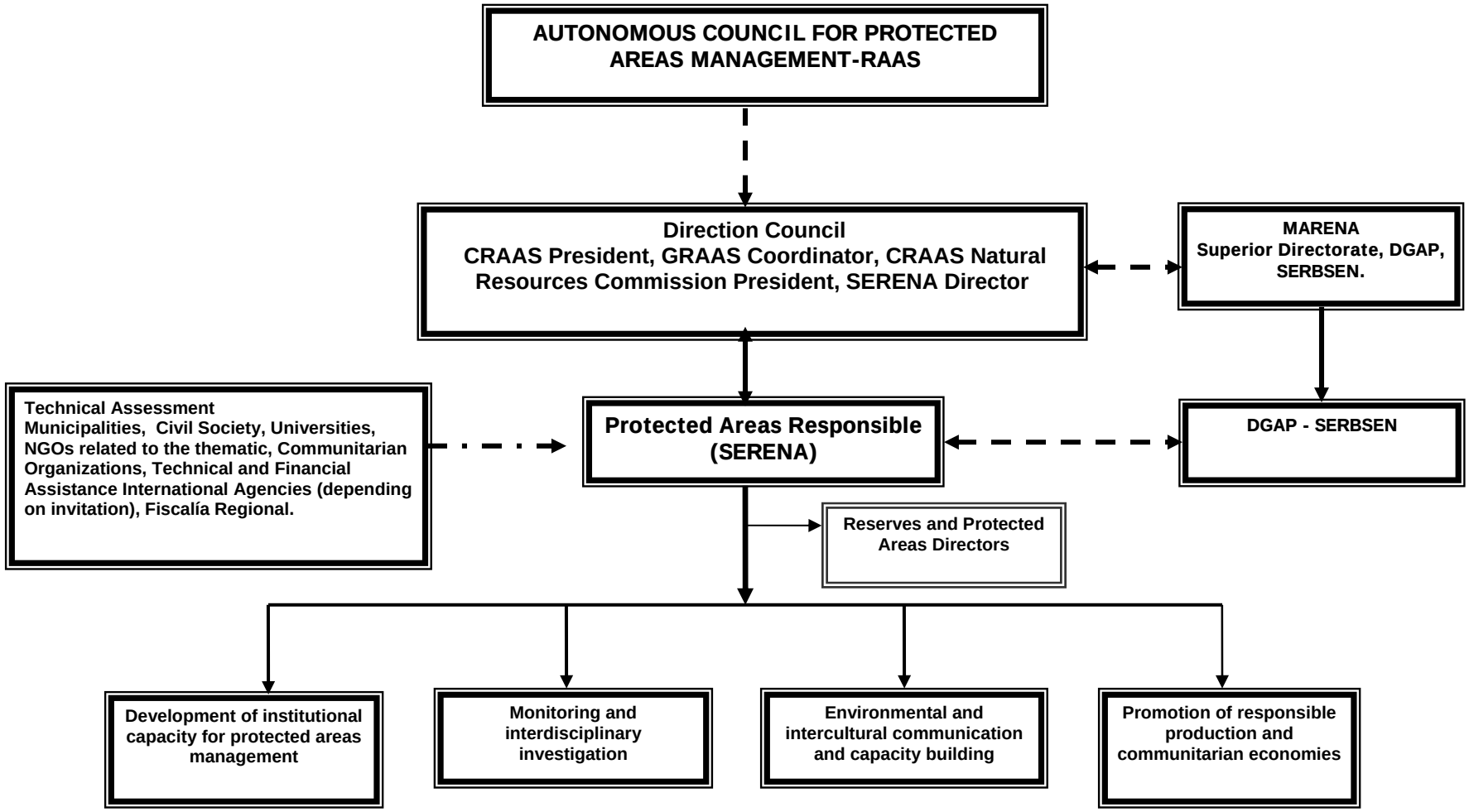


Figure 2: Coordination linkages as proposed for the decentralized management of the South Atlantic Autonomous Region.

The above is part of the decentralization proposal for protected areas of the RAAS, and was drawn up with the participation of local stakeholders. The final document has been agreed upon by actors in the RAAS and is currently under revision at MARENA.

PART XIV: UNDP FINANCIAL SCORECARD

Introduction

Context

Protected area financing is critical for sound PA management. However, globally, protected area financing needs to be improved at both site and system level. Hence developing long-term financing systems is a key element for protected areas sustainability.

Protected area "financial sustainability" refers to the ability of a country to meet all costs associated with the management of a protected area system. This implies a funding "supply" issue of generating more revenue, but as importantly, a "demand" side challengites and at the system level). PA financial sustainability needs to be addressed from both sides of the financial equation. It is this systematic process of defining costs and identifying ways to meet those costs that constitutes financial planning. Good financial planning enables PA managers to make strategic financial decisions such as re-allocating spending to match management priorities, and identifying appropriate cost reductions and potential cash flow problems. In addition to cost and revenue concerns, a third area that requires special consideration in order to achieve PA financial sustainability is institutional arrangements. In many cases, efficient, transparent, credible mechanisms for collecting PA related fees are not in place.

Therefore, UNDP has developed this scorecard to assist project teams and governments track their progress to make PA systems more financially sustainable. The Scorecard has been designed at the PA system level and not site level because:

- There are activities required at a network level and not just a site such as policy reform, fund management and setting PA fees which can affect all PAs;
- There are activities that require a coordinated effort and support from several government institutions, particularly the Ministry of Finance, which are best achieved through a centralized management and financing system;
- Sites will often require similar activities so it is cost-effective to provide them centrally, such as training or verification of ambient quality and monitoring plans;
- It can allow more effective and coordinated fundraising;
- Reduce competition between sites; and
- Allow cross-subsidization between sites.

PA financing must be viewed at two levels. One is the basic status of a PA system's finances – how much is being spent and how much is needed to be spent for effective

management. This will look at annual expenditures, operational costs, investment needs, revenue generation etc. From this it is possible to assess financing gaps and financial targets for increasing budgets and expenditures and/or reducing management costs in order to balance accounts.

However, there are limitations to what a snapshot of a PA system's financial accounts shows about the underlying structure, health and future direction of a PA system's finances. One year there could be a high level of expenditure due to donor support a capital injection from a debt-for-nature swap or a jump in tourism. However, one year's financial status does not necessarily ensure future financial health of a PA system. To fully assess if a PA system is moving towards financial sustainability it is also important to investigate and analyse the structural foundations of what enables and promotes long-term financial improvements for PAs. A PA system's financing is based on many elements, which are becoming increasingly known, and are quite common across countries.

Purpose

The purpose of this scorecard is to assist governments, donors and NGOs to investigate and record both aspects of a financing system – its accounts and its underlying structural foundations – to show both its current health and status and to indicate if the system is holistically moving over the long-term towards an improved financial situation.

There is a section to record overall financial changes to the inflows and outflows of capital of the PA system. However, the scorecard is designed to check progress of elements which are the foundations of a PA financing system and which will lead to the future financial viability of a PA system. Therefore the scorecard is structured to look at elements of a financing system, described below.

This Tool will be complemented by an additional guide for cost-effective protected area management ie use of funds. This is currently under development at UNDP.

Structure

The scorecard is compartmentalized into three fundamental components for a fully functioning financial system at the site and system level – (i) governance and institutional frameworks, (ii) business planning and other tools for cost-effective management (eg accounting practices) and (iii) revenue generation.

COMPONENT 1: GOVERNANCE FRAMEWORKS THAT ENABLE SUSTAINABLE PA FINANCING

Legal, policy, regulatory and institutional frameworks affecting PA financing systems need to be clearly defined and supportive of effective financial planning, revenue generation, revenue retention and management. Institutional responsibilities must be clearly delineated and agreed, and an enabling policy and legal environment in place. Institutional governance structures must enable and require the use of effective,

transparent mechanisms for allocation, management and accounting of revenues and expenditures.

COMPONENT 2: BUSINESS PLANNING AND OTHER TOOLS FOR COST-EFFECTIVE MANAGEMENT

Financial planning, accounting and business planning are important tools for cost-effective management when undertaken on a regular and systematic basis. Effective financial planning requires accurate knowledge not only of revenues, but also of expenditure levels, patterns and requirements. Options for balancing the costs/revenues equation should include equal consideration of revenue increases and cost control. Good financial planning enables PA managers to make strategic financial decisions such as allocating spending to match management priorities, and identifying appropriate cost reductions and potential cash flow problems. One positive corollary to the application of management effectiveness frameworks in protected areas is the resulting increase in the confidence of donors and governments, who are thereby assured that funds invested in a protected area are being used effectively.

COMPONENT 3: TOOLS AND SYSTEMS FOR REVENUE GENERATION AND MOBILIZATION

PA systems must be able to attract and take advantage of all existing and potential revenue mechanisms within the context of their overall management priorities. Diversification of revenue sources is a powerful strategy to reduce vulnerability to external shocks. Sources of revenue for protected area systems include traditional funding sources – government subsidies and donor projects – along with innovative ones such as debt swaps, tourism concession arrangements, and in some cases, carefully controlled levels of resource extraction.

Scoring

The scoring is aimed to allow comparisons between years to show improvements in a given country. Score comparisons across countries will be possible. However, some countries will have different total scores as certain elements may or may not be applicable to them such as Trust Funds and payments for ecosystem services. Therefore the total score can be adjusted and for cross country comparisons percentage scores will be more useful.

In each country certain elements may be more important and difficult to achieve than others. In this case country teams should have flexibility to modify the current weighting system and increase the number of points allocated to a certain element so the scoring better suits their national conditions. Any modifications to scoring should be transparent and footnoted.

FINANCIAL SCORECARD – PART I – OVERALL FINANCIAL SITUATION

Overall Sustainability of a National Protected Area System	Baseline year[58] (US$)[59]	Year X[60] (US$)[61]	Year X+5 (forecasting) (US$)[62]	Comments
(i) Total annual expenditure for PAs (operating and investment costs)				State any extraordinary levels of capital investment in a given year
- national protected areas				
- national areas co-managed by NGOs				
- state/municipal protected areas				
- others				
(ii) Total annual government budget provided for PA management (excluding donor funds)				
- national protected areas				
- national areas co-managed by NGOs				
- state/municipal protected areas				
- others				
(ii) Total annual government budget provided for PA management (including donor funds, loans, debt-for nature swaps)				% of total budget provided by government
- national protected areas				
- national areas co-managed by NGOs				
- state/municipal protected areas				
- others				
(iii) Total annual revenue generation from PAs, broken down by source				
a. Tourism (fees, concessions and taxes)				

[58] Insert year
[59] Insert in footnote the local currency and exchange rate to US$ and date of rate
[60] Insert year
[61] Insert in footnote the local currency and exchange rate to US$ and date of rate
[62] Insert in footnote the local currency and exchange rate to US$ and date of rate

b. Payments for ecosystem services (PES)				
(iv) Net annual surplus/deficit[63]				
(iv) Percentage of PA generated revenues retained in the PA system for re-investment[64]				% of total budget provided by retained revenues
(v) Projected revenues (over 5 year period)				
- national protected areas				
- national areas co-managed by NGOs				
- state/municipal protected areas				
- others				
(vi) Estimated financing needs for *basic* management costs and investments to be covered				
(vii) Estimated financing needs for *optimal* management costs and investments to be covered				
(viii) Annual actual financing gap (financial needs – available finances)				
a. Annual financing gap for basic expenditure scenarios b. Annual financing gap for optimal expenditure scenarios				

[63] This will be more relevant to parastatals and PA agencies with autonomous budgets
[64] This includes funds to be shared by PAs with local stakeholders

FINANCIAL SCORECARD – PART II – ASSESSING ELEMENTS OF THE FINANCING SYSTEM

Component 1 – Legal, regulatory and institutional frameworks					**COMMENT**
Element 1 – Legal, policy and regulatory support for revenue generation by PAs	**None (0)**	**A few (1)**	**Some (2)**	**Fully (3)**	
(i) Laws have been reformed so that they do not constrain or act perversely towards PA revenue mechanisms					
(ii) Fiscal instruments such as taxes on tourism and water or tax breaks are introduced					
Element 2 - Legal, policy and regulatory support for revenue sharing within the PA system	**No (0)**	**Yes, but suboptimal (1)**	**Yes, satisfactory (2)**	**Yes, optimally (3)**	
(i) Laws, policies and procedures are in place for PA revenues to be retained by the PA system					
(ii) Laws, policies and procedures are in place for PA revenues to be retained, in part, at the PA site level					
(iii) Laws, policies and procedures are in place for revenue sharing at the PA site level with local stakeholders					
Element 3 - Legal and regulatory conditions for establishing endowment or trust funds[65]					
	No (0)	**Yes (3)**			
(i) A Trust Fund have been created to finance the PA system					
	None (0)	**Some (1)**	**Quite a few (2)**	**Fully (3)**	
(ii) Trust Funds have been created to finance specific PAs					
	No (0)	**Partially (1)**	**Quite well (2)**	**Fully (3)**	
(iii) Trust Funds are integrated into the national PA financing systems					
Element 4 - Legal, policy and regulatory support for alternative	**None (0)**	**Partial (1)**	**Satisfactory (2)**	**Full (3)**	

[65] Where a PA system does not require a Trust Fund due to robust financing within government award full 9 points

institutional arrangements for PA management					
(i) There are laws which allow and regulate delegation of PA management and associated financial affairs for concessions					
(ii) There are laws which allow and regulate delegation of PA management and associated financial affairs for co-management					
(ii) There are laws which allow and regulate delegation of PA management and associated financial affairs to local government					
(iv) There are laws which allow and regulate delegation of PA management and associated financial affairs for private reserves					
Element 5 - National PA financing strategies	**Not begun (0)**	**In progress (1)**	**Completed (3)**	**Under implementation (5)**	
(i) Policy for revenue generation and fee levels across PAs					
(ii) Criteria for allocation of PA budgets to PA sites (business plans, performance etc)					
(iii) Safeguards are in place to ensure that revenue generation does not adversely affect conservation objectives of Pas					
(iii) Policy to require all PA management plans to include financial sections based on standardized format and criteria					
(iv) Degree of implementation of national financing strategy and adoption of policies					
Element 6 - Economic valuation of protected area systems	**None (0)**	**Partial (1)**	**Satisfactory (2)**	**Full (3)**	
(i) Economic data on PA values exists					
(ii) PA economic values are properly documented					
(iii) PA economic values are recognized across government					
Element 7 - Improved government budgeting for PA systems	**No (0)**	**Yes (1)**			
(i) Policy of the Treasury towards budgeting for PAs provides for increased medium to long term financial resources in accordance with demonstrated needs					
(ii) Policy requires budgeting for PAs based on financial need as determined by the PA business plan					
(iii) There are policies that PA budgets should include funds for the livelihoods of communities living in and around the PA as part of threat reduction strategies					
Element 8 - Clearly defined institutional responsibilities for PA management and financing	**None (0)**	**Partial (1)**	**Improving (2)**	**Full (3)**	
(i) Mandates of institutions regarding PA finances are clear and agreed					
Element 9 - Well-defined staffing requirements, profiles and incentives at site and system level	**None (0)**	**Partial (1)**	**Almost there (2)**	**Full (3)**	
(i) Sufficient number of positions for economists and financial planners and					

analysts in the PA authorities to properly manage the finances of the PA system					
(ii) Laws and regulations motivate PA managers to promote site level financial sustainability					
(iii) PA managers are accountable for balanced budgets					
(iv) TORs for PA staff include responsibilities for revenue generation, financial management and cost-effectiveness					
(v) PA managers have the flexibility to budget and plan for the long-term					
(vi) Incentives are offered for PA managers to implement business plans					
Total Score for Component 1					**SCORE:**
Component 2 – Business planning and tools for cost-effective management					
Element 1 - Site-level business planning	**Not begun (0)**	**Early stages (1)**	**Near complete (2)**	**Completed (3)**	
(i) Business plans, based on standard formats, are developed for upto four pilot sites					
(ii) Business plans implemented at the pilot sites, measured by degree of achievement of objectives					
(iii) Business plans developed for all appropriate sites					
(iv) Business plans are directly linked to management plan goals and objectives					
(v) Preparation of participatory management plans including business plans in use across the PA network					
(vi) Monitoring and reporting on business plans through enhanced activity-based cost accounting that feeds into system wide accounting and budgeting					
Element 2 - Operational, transparent and useful accounting and auditing systems	**None (0)**	**Partial (1)**	**Near complete (2)**	**Fully completed (3)**	
(i) Policy and regulations require comprehensive, coordinated cost accounting systems to be in place					
(ii) Transparent and coordinated cost and investment accounting systems are operational (iii) Revenue tracking systems for each PA in place and operational					
(iv) Regular monitoring and reporting of PA investments and revenue generation occurs					
Element 3 - Systems for monitoring and reporting on financial management performance	**None (0)**	**Partial (1)**	**Near completed (2)**	**Done and operational (3)**	
(i) All PA revenues and expenditures are fully and accurately reported and tracked by government and are made transparent					
(ii) Positive return on investments from capital improvements measured and					

reported					
(iii) Financial performance of PAs is evaluated and reported (linked to cost-effectiveness)					
Element 4 - Methods for allocating funds across individual PA sites	**No (0)**	**Yes (1)**			
(i) National PA budget is appropriately allocated to sites based on criteria agreed in national financing strategy					
(ii) Policy and criteria for allocating funds to co-managed PAs complement site based fundraising efforts					
(iii) A monitoring and reporting system in place to show how and why funds are allocated across PA sites and headquarters					
Element 5 - Training and support networks to enable park managers to operate more cost-effectively	**Not available (0)**	**Partially done (1)**	**Almost done (2)**	**Fully (3)**	
(i) Guidance on cost-effective management developed and being used by PA managers					
(ii) Operational and investment cost comparisons between PA sites complete, available and being used to track PA manager performance					
(iii) Monitoring and learning systems of cost-effectiveness are in place and feed into management policy and planning					
(iv) PA managers are trained in financial management and cost-effective management					
(v) PA managers share costs of common practices with each other and with PA headquarters[66]					
Total Score for Component 2					**SCORE:**
Component 3 – Tools for revenue generation					
Element 1 - Increase in number and variety of revenue sources used across the PA system	**No (0)**	**Partially (1)**	**A fair amount (2)**	**Fully (3)**	
(i) Analysis of all revenue options for the country complete and available including feasibility studies;					
(ii) There is a diverse set of sources and mechanisms generating funds for the PA system					
(iii) Increased number of PAs operating effective revenue mechanisms and generating positive returns					
Element 2 - Setting and establishment of user fees across the PA system	**No (0)**	**Yes (1)**			
(i) A system wide strategy and implementation plan complete and adopted by government for user fees					

[66] This might include aerial surveys, marine pollution monitoring, economic valuations etc.

(ii) The national tourism industry and Ministry is supportive and a partner in the PA user fee system and programmes					
(iii) Tourism related infrastructure investment is proposed for PA sites across the network based on revenue potential, return on investment and level of entrance fees					
(iv) Where tourism is promoted PA managers can demonstrate maximum revenue whilst still meeting PA conservation objectives					
Element 3 - Effective fee collection systems	**None (0)**	**Partial (1)**	**Towards completion (2)**	**Full (3)**	
(i) A system wide strategy and implementation plan complete and adopted by PA authorities (including co-managers) for fee collection					
Element 4 - Marketing and communication strategies for revenue generation mechanisms	**None (0)**	**Partial (1)**	**Satisfactory (2)**	**Full (3)**	
(i) Communication campaigns for the public about the tourism fees, new conservation taxes etc are widespread and high profile					
Element 5 - Operational PES schemes for PAs[67]	**None (0)**	**Partial (1)**	**Progressing (2)**	**Full (3)**	
(i) A system wide strategy and implementation plan complete and adopted by government for PES					
(ii) Pilot PES schemes at select sites developed					
(iii) Operational performance of pilots is evaluated and reported					
(iv) Scale up of PES across the PA system is underway					
Element 6 - Operational concessions within PAs	**None (0)**	**Partial (1)**	**Progressing (2)**	**Full (3)**	
(i) A system wide strategy and implementation plan complete and adopted by government for concessions					
(ii) Concession opportunities are identified at the site and system levels					
(iii) Concession opportunities are operational at pilot sites					
(iv) Operational performance of pilots is evaluated, reported and acted upon					
Element 7 - PA training programmes on revenue generation mechanisms	**None (0)**	**Limited (1)**	**Satisfactory (2)**	**Extensive (3)**	
(i) Training courses run by the government and other competent organizations for PA managers on revenue mechanisms and financial administration					
Total Score for Component 3					**SCORE:**

[67] Where PES is not appropriate or feasible for a PA system take 12 points off total possible score for the PA system

FINANCIAL SCORECARD – PART III – SCORING AND MEASURING PROGRESS

Total Score for PA System				
Total Possible Score				
Percentage of actual score of total possible score				
Percentage scored previous year				

PART XV: METT SCORES FOR THE NICARAGUA´S NATIONAL PROTECTED AREA SYSTEM

Issue	Criteria	Score	Comments	Next steps
1. Legal status Does the protected area have legal status? *Context*	The protected area is not gazetted	0		
	The government has agreed that the protected area should be gazetted but the process has not yet begun	1		
	The protected area is in the process of being gazetted but the process is still incomplete	2		
	The protected area has been legally gazetted (or in the case of private reserves is owned	**3**	**All the 76 protected areas of the SINAP have been legally gazetted**	
2. Protected area regulations Are inappropriate land uses and activities (e.g. poaching) controlled? *Context*	There are no mechanisms for controlling inappropriate land use and activities in the protected area	0		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are major problems in implementing them effectively	**1**	**There are several control mechanisms but they are not effectively implemented due to budgetary constrains**	**GEF Project will work towards improving the financial situation of SINAP**
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them	2		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented	3		
3. Law enforcement Can staff enforce protected area rules well enough?	The staff have no effective capacity/resources to enforce protected area legislation and regulations	0		
	There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)	**1**	**Protected areas staff work with very constrained budgets, resulting in major staff and equipment deficiencies**	**GEF Project will work towards improving the financial situation of SINAP**

Issue	Criteria	Score	Comments	Next steps
Context	The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain	2		
	The staff have excellent capacity/resources to enforce protected area legislation and Regulations	3		

Issue	Criteria	Score	Comments	Next steps
4. Protected area objectives Have objectives been agreed? *Planning*	No firm objectives have been agreed for the protected area	0		
	The protected area has agreed objectives, but is not managed according to these Objectives	**1**	**Sinap objectives are aimed just to conservation, without considering livelihood needs**	**GEF project will work for an improved strategic and management framework for SINAP, designing a conceptual framework to involve key stakeholders on protected areas management**
	The protected area has agreed objectives, but these are only partially implemented	2		
	The protected area has agreed objectives and is managed to meet these objectives	3		
5. Protected area design Does the protected area need enlarging, corridors etc to meet its objectives? *Planning*	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible	0		
	Inadequacies in design mean that achievement of major objectives are constrained to some extent	**1**	**Most of protected areas were designed without a real knowledge of their biodiversity, social and cultural values**	**GEF project will work for an improved strategic and management framework for SINAP**
	Design is not significantly constraining achievement of major objectives, but could be improved	2		
	Reserve design features are particularly aiding achievement of major objectives of the protected area	3		
6. Protected area boundary demarcation	The boundary of the protected area is not known by the management authority or local residents/neighboring land users	0	*Possible issue for comment:* are there tenure disagreements affecting the protected area?	

Issue	Criteria	Score	Comments	Next steps
Is the boundary known and demarcated? *Context*	**The boundary of the protected area is known by the management authority but is not known by local residents/neighboring land Users**	**1**	**Only in some protected areas of the pacific region people and authorities have a good knowledge about protected areas boundaries**	**GEF project will work on the dissemination of results of Gap analysis to be done with PASMA II funding. This analysis will deliver an updated ecosystems map, which will allow to update PA´s boundaries**
	The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated	2		
	The boundary of the protected area is known by the management authority and local residents and is appropriately demarcated	3		
7. Management plan Is there a management plan and is it being implemented? *Planning*	There is no management plan for the protected area	0		
	A management plan is being prepared or has been prepared but is not being implemented	1		
	An approved management plan exists but it is only being partially implemented because of funding constraints or other problems	**2**	**25 (of 76) protected areas have approved management plans but these are only partially implemented. 10 additional protected areas are currently in process of elaboration or approval of their management plans.**	
	An approved management plan exists and is being implemented	3		
Additional points *Planning*	**The planning process allows adequate opportunity for key stakeholders to influence**	**+1**	**By legislation, stakeholders participate on the formulation of management plans**	
	There is an established schedule and process for periodic review and updating of the	**+1**	**By legislation, management plans must be reviewed and updated every 5 years**	
	The results of monitoring, research and evaluation are routinely incorporated into planning	+1		

Issue	Criteria	Score	Comments	Next steps
8. Regular work plan Is there an annual work plan? *Planning/Outputs*	No regular work plan exists	0		
	A regular work plan exists but activities are not monitored against the plan's targets	**1**	**Every management plan has regular annual work plans, but generally these are not monitored**	
	A regular work plan exists and actions are monitored against the plan's targets, but many activities are not completed	2		
	A regular work plan exists, actions are monitored against the plan's targets and most or all prescribed activities are completed	3		
9. Resource inventory Do you have enough information to manage the area? *Context*	There is little or no information available on the critical habitats, species and cultural values of the protected area	0		
	Information on the critical habitats, species and cultural values of the protected area is not sufficient to support planning and decision	**1**	**There is no enough information on SINAP's biodiversity values**	**Gap analysis will proportionate updated scientific information on which to ground conservation decisions.**
	Information on the critical habitats, species and cultural values of the protected area is sufficient for key areas of planning/decision making but the necessary survey work is not being maintained	2		
	Information concerning on the critical habitats, species and cultural values of the protected area is sufficient to support planning and decision making and is being maintained	3		
10. Research Is there a programme of management-orientated survey and research work?	**There is no survey or research work taking place in the protected area**	**0**		**Project will work to enhance stakeholders' participation on protected areas management, and this is a good tool to know the management needs of the protected area.**
	There is some ad hoc survey and research Work	1		

Issue	Criteria	Score	Comments	Next steps
	There is considerable survey and research work but it is not directed towards the needs of protected area management	2		
Inputs	There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	3		
11. Resource management Is the protected area adequately managed (e.g. for fire, invasive species, poaching)? *Process*	**Requirements for active management of critical ecosystems, species and cultural values have not been assessed**	**0**		
	Requirements for active management of critical ecosystems, species and cultural values are known but are not being	1		
	Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed	2		
	Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed	3		
12. Staff numbers Are there enough people employed to manage the protected area?	There are no staff	0		
	Staff numbers are inadequate for critical management activities	**1**	**There are 225 people working for SINAP, but only 126 are park guards. This personnel is financed by external project funding.**	**GEF project will work for financial sustainability, to enable hiring more personnel, but also for the involvement of other actors in management activities**
	Staff numbers are below optimum level for critical management activities	2		
Inputs	Staff numbers are adequate for the management needs of the site	3		
13. Personnel management	Problems with personnel management constrain the achievement of major management objectives	0		

Issue	Criteria	Score	Comments	Next steps
	Problems with personnel management partially constrain the achievement of major management objectives	**1**		
	Personnel management is adequate to the achievement of major management objectives but could be improved	2		
	Personnel management is excellent and aids the achievement major management objectives	3		
14. Staff training Is there enough training for staff? *Inputs/Process*	Staff are untrained	0		
	Staff training and skills are low relative to the needs of the protected area	**1**		
	Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management	2		
	Staff training and skills are in tune with the management needs of the protected area, and with anticipated future needs	3		
15. Current budget Is the current budget sufficient? *Inputs*	There is no budget for the protected area	0		
	The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage	**1**		
	The available budget is acceptable, but could be further improved to fully achieve effective management	2		
	The available budget is sufficient and meets the full management needs of the protected Area	3		
16. Security of budget Is the budget secure?	**There is no secure budget for the protected area and management is wholly reliant on outside or year by year funding**	**0**	**Most of budget for SINAP management comes from external funding**	**GEF project will work for SINAP financial sustainability**
	There is very little secure budget and the protected area could not function adequately without outside funding	1		

Issue	Criteria	Score	Comments	Next steps
	There is a reasonably secure core budget for the protected area but many innovations and initiatives are reliant on outside funding	2		
	There is a secure budget for the protected area and its management needs on a multi-year cycle	3		
17. Management of budget Is the budget managed to meet critical management needs? *Process*	**Budget management is poor and significantly undermines effectiveness**	**0**		
	Budget management is poor and constrains Effectiveness	1		
	Budget management is adequate but could be improved	2		
	Budget management is excellent and aids effectiveness	3		
18. Equipment Are there adequate equipment and facilities? *Process*	There are little or no equipment and facilities	0		
	There are some equipment and facilities but these are wholly inadequate	1		
	There are equipment and facilities, but still some major gaps that constrain management	**2**	**Equipment and facilities are provided by projects for protected areas under direct intervention**	
	There are adequate equipment and facilities	3		
19. Maintenance of equipment Is equipment adequately maintained? *Process*	There is little or no maintenance of equipment and facilities	0		
	There is some ad *hoc* maintenance of equipment and facilities	**1**	**Maintenance of equipment and facilities is done by projects for protected areas under their direct intervention**	
	There is maintenance of equipment and facilities, but there are some important gaps in maintenance	2		

Issue	Criteria	Score	Comments	Next steps
	Equipment and facilities are well maintained	3		
20. Education and awareness programme Is there a planned education programme? *Process*	There is no education and awareness programme	0		
	There is a limited and ad *hoc* education and awareness programme, but no overall planning for this	**1**		
	There is a planned education and awareness programme but there are still serious gaps	2		
	There is a planned and effective education and awareness programme fully linked to the objectives and needs of the protected area	3		
21. State and commercial neighbours	There is no contact between managers and neighbouring official or corporate land users	0		
	There is limited contact between managers and neighbouring official or corporate land users	1		
	There is regular contact between managers and neighbouring official or corporate land users, but only limited co-operation	**2**		
	There is regular contact between managers and neighbouring official or corporate land users, and substantial co-operation on	3		
22. Indigenous people Do indigenous and traditional peoples resident or regularly using the PA have input to management	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area	0		
	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in	1		
	Indigenous and traditional peoples directly contribute to some decisions relating to management	2		

Issue	Criteria	Score	Comments	Next steps
	Indigenous and traditional peoples directly participate in making decisions relating to management	**3**	**By legislation, indigenous and traditional people directly participate in decisions making and in management activities**	
23. Local communities Do local communities resident or near the protected area have input to management decisions? *Process* Additional points *Outputs*	Local communities have no input into decisions relating to the management of the protected area	0		
	Local communities have some input into discussions relating to management but no direct involvement in the resulting decisions	1		
	Local communities directly contribute to some decisions relating to management	**2**	**By legislation, local communities should directly participate in decisions making and in management activities, however there is no adequate participating structures for them to do so. This varies a lot from PA to PA.**	**The GEF project will support the creating of participation mechanisms on municipal level.**
	Local communities directly participate in making decisions relating to management	3		
	There is open communication and trust between local stakeholders and protected area managers	+1	Just in some areas	
	Programmes to enhance local community welfare, while conserving protected area resources, are being implemented	+1	Just in some areas	
24. Visitor facilities Are visitor facilities (for tourists, pilgrims etc) good enough? *Outputs*	There are no visitor facilities and services	0		
	Visitor facilities and services are Inappropriate for current levels of visitation or are under construction	**1**	**Very few areas have visitor facilities and services**	
	Visitor facilities and services are adequate for current levels of visitation but could be improved	2		
	Visitor facilities and services are excellent for current levels of visitation	3		

Issue	Criteria	Score	Comments	Next steps
25. Commercial tourism Do commercial tour operators contribute to protected area management? *Process*	**There is little or no contact between managers and tourism operators using the protected area**	**0**		
	There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters	1		
	There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected	2		
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve	3		
26. Fees If fees (tourism, fines) are applied, do they help protected area management? *Outputs*	**Although fees are theoretically applied, they are not collected**	**0**	**SINAP is not allowed to collect fees**	**GEF project will support the review and approval of a Tariffs Law to allow the fees collection**
	The fee is collected, but it goes straight to central government and is not returned to the protected area or its environs	1		
	The fee is collected, but is disbursed to the local authority rather than the protected area	2		
	There is a fee for visiting the protected area that helps to support this and/or other protected areas	3		
27. Condition assessment Is the protected area being managed consistent to its objectives? *Outcomes* Additional points *Outputs*	Important biodiversity, ecological and cultural values are being severely degraded	0	There is no certainty about this, because only punctual studies are being done so far.	Gap analysis will proportionate updated information about biodiversity and ecological values of SINAP
	Some biodiversity, ecological and cultural values are being severely degraded	1		
	Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been	2		
	Biodiversity, ecological and cultural values are predominantly intact	3		
	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone	+1	Just some isolated efforts	

Issue	Criteria	Score	Comments	Next steps
28. Access assessment Is access/resource use sufficiently controlled? *Outcomes*	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated	0		
	Protection systems are only partially effective in controlling access or use of the reserve	**1**		
	Protection systems are moderately effective in controlling access or use of the reserve in accordance with designated objectives	2		
	Protection systems are largely or wholly effective in controlling access or use of the reserve in accordance with designated	3		
29. Economic benefit assessment Is the protected area providing economic benefits to local communities? *Outcomes*	**The existence of the protected area has reduced the options for economic development of the local communities**	**0**	**Most of the management categories prohibit economic development**	**GEF project will work on changes to SINAP conceptual framework and mechanisms and tools, including management categories**
	The existence of the protected area has neither damaged nor benefited the local economy	1		
	There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance	2		
	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area	3		
30. Monitoring and evaluation Are management activities monitored against performance? *Planning/Process*	There is no monitoring and evaluation in the protected area	0		
	There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results	1		
	There is an agreed and implemented monitoring and evaluation system but results are not systematically used for management	**2**	**SINAP should be (in theory) monitored using a system developed by TNC for Central American countries, but this is applied only in a minimum of protected areas.**	

Issue	Criteria	Score	Comments	Next steps
	A good monitoring and evaluation system exists, is well implemented and used in adaptive management	3		
	TOTAL SCORE	**33**		

PART XVI: TRACKING TOOL FOR GEF BIODIVERSITY FOCAL AREA

Section One: Project General Information

1. Project name:

Strengthening and Catalyzing of Sustainability of Nicaragua's Protected Area System

2. Country (ies): Nicaragua

National Project: ____X___ Regional Project:_____ Global Project:_____

3. Name of reviewers completing tracking tool and completion dates:

	Name	**Title**	**Agency**
Work Program Inclusion	**Santiago Carrizosa**	**Regional Technical Advisor**	**UNDP/ GEF RCU**
Project Mid-term			
Final Evaluation/project completion			

4. Funding information

GEF support:___1,800,000_____
Co-financing:___3,820,000_____
Total Funding:__5,620,000_____

5. Project duration: ***Planned***____4___ years ***Actual*** _____ years

6. a. GEF Agency: □ **UNDP** □ UNEP □ World Bank □ ADB □ AfDB □ IADB □ EBRD □ FAO □ IFAD □ UNIDO

6. b. Lead Project Executing Agency (ies):

Ministry of Environment and Natural Resources

7. GEF Operational Program:
□ drylands (OP 1)
□ coastal, marine, freshwater (OP 2)
□ forests (OP 3)
□ mountains (OP 4)
□ agro-biodiversity (OP 13)
□ integrated ecosystem management (OP 12)
□ sustainable land management (OP 15)

Other Operational Program not listed above: OP 14 with elements of OP-12 and indirectly to OP-15.

8. Project Summary (one paragraph):

Project will work with existing national and international efforts to improve the management of SINAP through improved enabling policies, improved strategic framework, improved system and site-level management systems, and increased capacity for sustainable financing that will lead to management of the Protected Areas System in support of in-situ biodiversity conservation and benefits in support of the CBD and regional conventions.

9. Project Development Objective:

Nicaraguan society conserves biodiversity in-situ through a sustainable National Protected Areas System

10. Project Purpose/Immediate Objective:

The Nicaraguan Protected Areas System is effectively managed through legal reforms, strengthened institutions, sustainable financing and partnerships

11. Expected Outcomes (GEF-related):

1. Enhanced Policy and legal framework enables improved SINAP management and finances
2. PA management responsibilities are shared by key stakeholders
3. Capacities for Sustainable Financing of SINAP and PAs developed
4. Institutionalizing management and learning within project and MARENA

12. Types of Protected Area Activities Supported:

12. a. Please select all activities that are being supported through the project.

__Enabling Environment (please check each activity below)

_**X**_ Policy, legislation, regulation

__**X**_ Capacity building
Capacity building budget: __$ 427,217_____

(Please record budgets for capacity building if they are clearly identified as a discrete budget line.)
Comments on Capacity Building: Please note if capacity building is geared towards indigenous and local communities:

Capacity building to enhance stakeholder participation in PA management, including representation and Technical assistance in organizational development at the municipal level, as well as in financing issues. This activities will be developed at systemic level, including autonomous regions were pas should be managed by local and indigenous communities.

_X__ Education and awareness raising
_X__ Institutional arrangements

_X__ Finance and incentives

_X__ Replication and scaling up

___Management practices related to status of biodiversity

12. b. Is carbon sequestration an objective of the project (This question is included for purposes related to the GEF-3 targets for the Climate Change focal area)

____Yes __X__No

The estimated amount of carbon sequestered is:_____

13. Project Replication Strategy

13. a . Does the project specify budget, activities, and outputs for implementing the replication strategy?
Yes_X__ No___

13. b. For all projects, please complete box below. An example is provided.

Replication Quantification Measure	**Replication Target Foreseen at project start**	**Achievement at Mid-term Evaluation of Project**	**Achievement at Final Evaluation of Project**
Business plans are prepared along with management plans in non-pilot Pas in the Central and Western region	8 PAs (based on number of co-managed Pas in the system)		
The cost and revenue accounting tool is used in non-pilot Pas in the Central and Western region	19 PAs (based on the number of co-managed PAs and the 11 PAs being supported by IDR where the accounting system can also be applied)		
Number of PAs being supported by functioning and effective multi-stakeholder municipal councils	Management of 50 PAs being supported by municipal councils		
Number of PAs where landowners are being supported to modify their land management practices, by municipal councils and government development agencies, based on lessons learned from the IDR models undertaken in 11 pilot PAs	11 PAs (based on the assumption that each IDR pilot PA can partner with another PA and supporting municipality to transfer lessons and best practices)		

14. Scope and Scale of Project:
Please complete the following statements.

14.a. The project is working in:

____ a single protected area
__X_ multiple protected areas

__X_ national protected area system

14.b. The level of the intervention is:
_____ global
_____ regional
__X_ national
__X_ subnational

14. c. Please complete the table below.
An example is completed.

Targets and Timeframe Project Coverage	Foreseen at project start	Achievement at Mid-term Evaluation of Project	Achievement at Final Evaluation of Project
Extent in hectares of protected areas with improved conservation management	321,813 hectares		

Name of Protected Area	Is this a new	Area in Hectares	Global designation or priority lists	Local Designation of Protected Area (E.g,	IUCN Category for each Protected Area[68]

14. d. Please complete the table below for the protected areas that are the target of the GEF intervention. Use NA **for not applicable. <u>Examples are provided below.</u>**

68

I. Strict Nature Reserve/Wilderness Area: managed mainly for science or wilderness protection
II. National Park: managed mainly for ecosystem protection and recreation
III. Natural Monument: managed mainly for conservation of specific natural features
IV. Habitat/Species Management Area: managed mainly for conservation through management intervention
V. Protected Landscape/Seascape: managed mainly for landscape/seascape protection and recreation
VI. Managed Resource Protected Area: managed mainly for the sustainable use of natural ecosystems

					I	II	III	IV	V	VI
1. Cordillera Dipilto y Jalapa	**No**	**41,200**	**NA (Not applicable)**	**Natural Reserve**						X
2. Complejo Volcánico Pilas-El Hoyo	**No**	**7,422**	**NA (Not applicable)**	**Natural Reserve**						X
3. Estero Padre Ramos	**No**	**8,800**	**NA (Not applicable)**	**Natural Reserve**						X
4. Cerro Datanlí-El Diablo	**No**	**2,216**	**NA (Not applicable)**	**Natural Reserve**						X

SIGNATURE PAGE

[Note : leave blank until preparing for submission for CEO endorsement]

Country: _____

UNDAF Outcome(s)/Indicator(s):

_____

(Link to UNDAF outcome., If no UNDAF, leave blank)

Expected Outcome(s)/Indicator (s):

_____

(CP outcomes linked t the SRF/MYFF goal and service line)

_____

Expected Output(s)/Indicator(s):

_____

(CP outcomes linked t the SRF/MYFF goal and service line)

_____

Implementing partner: _____
(designated institution/Executing agency)

Other Partners: _____

_____

Programme Period:_____
Programme Component:_____
Project Title:_____
Project ID: 00055603
Project Award: 00046611
Project Duration: _____
Management Arrangement: _____

Total budget: _____
Allocated resources: _____
- Government _____
- Regular _____
- Other:
  - Donor _____
  - Donor _____
  - Donor _____
- In kind contributions _____

Agreed by (Government): _____
Agreed by (Implementing partner/Executing agency):_____
Agreed by (UNDP):_____