Annexes to the Project Document

(Excluding GEF Executive Summary)

ANNEX 1	Logical Framework (Also Appendix B of GEF Executive Summary)
ANNEX 3:	Map of the Sixaola Binational River Basin
ANNEX 4:	Project Execution Framework

ANNEX 1 (Also Annex B GEF Executive Summary) : LOGICAL FRAMEWORK

NARRATIVE SUMMARY	VERIFIABLE OUTCOME INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
GOAL: *To contribute to the improvement of the health and integrity of the ecosystems, as well as the well-being of the population in the Binational Sixaola River Basin*	After 3 years of having finalized the Project: a. the area of natural forest cover in the Basin is the same or has expanded compared to the level at the end of Year 1 (*XX ha. Baseline to be established during Year 1*); b. the Social Development Index (Costa Rica) and Human Development Index (Panama) in the Basin are the same with respect to the baseline at the beginning of the Project (*Baseline IDS: 0 and IDH: 0.608*); c. annual public investment for the binational integrated ecosystem management in the Basin has increased compared to marginal contributions at the beginning of the Project (*Baseline: to be established at the end of Year 1*); d. the water quality in the Binational Sixaola River Basin is stabilized as shown by a maintenance of the Biotic Integrity Index in the Yorkín watershed at regular level (3 on a scale of 1-5, where 1 is poor and 5 is excellent), *which is the level at the beginning of the Project*[1]; e. the populations of key species in the representative ecosystems in the Basin maintain stability compared to their levels at the end of Year 1 (*Baseline: to be established during Year 1*);	a. Aerial photography and official statistics of forest coverage from environmental authorities (ANAM and MINAE) b. Socio-economic statistics MIDEPLAN-MEF c. Statistics from MIDEPLAN-MEF d. Reports on the monitoring of waters and soils from e. Reports on the monitoring of biodiversity, from the System of Territorial Information	▪ Priority of the actors in both countries is maintained with regard to the sustainable development of the Binational Sixaola River Basin
PURPOSE: *To contribute to the sustainable use and conservation of biodiversity, water, and soil resources, through the creation of an enabling environment for the integrated and cross-cutting management of the Binational Sixaola River Basin*	At the end of the project: a. the Binational Commission for the Sixaola River Basin is operating efficiently and is taking decisions in a participatory manner based on accurate technical information (*Baseline: at the beginning of the Project the Commission will have been formally established, but with no practical experiences in taking decisions, and the Territorial Information System is marginally used*). b. land-use conflicts, defined in terms of optimal vs actual land-use, has been reduced by a third compared to the level at the end of Year 1 (*Baseline to be established during Year 1*); c. alternative sustainable financing sources leveraged at the national or local level are covering at least 10% of the recurrent costs related to	General for all: Evaluation at the mid-term and at the end, and Project Performance Monitoring Reports (IDB) and Project Implementation Reports (GEF) a. Minutes of meetings of the Bi-national Commission of the Basin; POAs Bi-national Basin Commission and updated SIT b. Aerial or satellite photographs and/ or flights over the area c. Financial reports of the Bi-national Commission of the Sixaola River Basin	▪ Priority of the actors in both countries is maintained with regard to the sustainable development of the Binational Sixaola River Basin ▪ Governments from both countries collaborate in the development and enactment of the legal framework, policies and

[1] This water quality indicator may be complemented by other cost-effective indicators.

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	the integrated binational management of the Basin compared to marginal domestic allocations at the beginning of the Project; d. at least 20% of the land-surface dedicated to agro-chemically intensive banana production at the beginning of the Project is shifted to organic production (*Baseline: 12,400 hectares of pesticide intensive banana production at the beginning of the Project*); e. critical elements of the management plans of the transboundary protected areas are harmonized between the two countries and management actions are carried out according to these harmonized plans (*Baseline: at the beginning of the Costa Rican and Panamaian sectors of PILA, San San-Pond Sak and Gandoca-Manzanillo have separate plans*);	d. Field visits and reports of the System of Territorial Information e. Reports of the Commissions of the protected areas and the evaluations on the implementation of the management plans	regulations for the integrated management of the Basin ▪ Private owners and farmers within the Basin perceive benefits derived from the development of sustainable management activities ▪ Co-financing is delivered in an opportune manner

NARRATIVE SUMMARY	VERIFIABLE OUTPUT INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
OBJECTIVE 1: To strengthen the bi-national institutional framework for an integrated management and enhancement of technical and operational capacities of the institutions involved, indigenous organizations, and civil society organizations			
Activity 1.a: *Strengthen the technical and operational capacities of key stakeholders of the Basin (regional and local public institutions and social actors)*	a. At the end of year two, 10 ANAM-MINAE staff members, trained (and equipped) in water quality control and protected area management (*Baseline: limited capacity and equipment for the basin at the beginning of the Project*); b. At the end of year two, 12 MAG-MIDA/ Ministry of Health staff members trained (and equipped) in the control and use of agrochemicals (*Baseline: limited capacity and equipment for the basin at the beginning of the Project*); c. At the end of year two, 16 staff members (MIDA-MAG-ANAM Municipalities) trained in environmental-territorial planning and management (*Baseline: limited capacity and equipment for the basin at the beginning of the Project*); d. At the end of year one, Territorial Information System installed and operative in 6 key institutions and inter-institutional updating protocol established (*Baseline: system not completely installed*); e. At the end of the Project, 2 environmental units created and equipped in Indigenous Governments (*Baseline: environmental units are not established*); f. 15 community leaders trained in norms and instruments for the monitoring and protection of natural resources (*Baseline: leaders not*	a. Evaluation documents of the progress of the implementation of the institution's Strengthening Plans. b. Evaluation documents of the progress in the implementation of the institution's Strengthening Plans. c. Receipt documents for equipment and supplies. d. Visits to the ADIs to prove physical location and technical and human means available to the Environmental Units created e. Registries of assistance and evaluation report of the training sessions. f. Memoirs of workshops, evaluations of the events, and lists of participants g. Training reports h. Training reports	▪ Institutions, indigenous organizations, and civil society organizations perceive benefits derived from the development of the Project ▪ Specific responsibilities are assigned by the institutions and other stakeholders in order to maintain and update the TIS ▪ The ADI and municipalities are willing to assign the counterpart personnel team for the environmental units

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	trained in monitoring and protection of natural resource management); g. 20 workshops – 20/ 30 assistants- for the promotion and training of communities for their collaboration in supervision and monitoring actions (environmental / water quality) (*Baseline: no formal workshops for communities are held in the Basin*); h. 10 organizations (ASADAS / Community Aqueducts) strengthened in technical aspects for micro watershed management (*Baseline: to be established at the end of year one*);		
Activity 1.b: *Strengthen the bi-national coordination frameworks*	a. The Bi-national Basin Commission will meet at least 2 times per year *(Base line: the Commission does not exist)*; b. Developed legal instruments based on the Bi-national Agreement (Permanent Bi-national Commission) to facilitate future bi-national project management *(Base Line: Agreement presents weaknesses for the implementation of projects)*; c. At the end of year 2, database of projects operating in the basin and web page elaborated *(Base Line: database does not exists)*; d. Organization of at least 1 workshop per year for information-coordination of donors and developers of projects in the basin *(Base line: does not exist)* e. At the end of year 1, Action Plans of PILA and Wetlands Bi-national Commissions defined, and the viability of the integration of both of them in a single ASPT commission analyzed *(Base line: the PILA and Wetland commissions are not coordinated)*	a. Reports of the Bi-national Commission of the Basin b. Document of Legal Analysis c. Project database and Web page operating in the basin d. Memoirs of symposium-forums e. Memoirs of advances made in the implementation of the Action Plan of the PILA and Wetlands Bi-national Commission	▪ The governments of Costa Rica and Panama continue to be willing to allocate resources for the Basin ▪ Priority of the stakeholders in both countries is maintained with regard to the relevance of the Bi-national Sixaola River Basin ▪ The financers and executors of projects in the basin willing to collaborate and share information

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Activity 1.c: *Enhance sustainable financing for the management of the basin*	a. At the end of the project, 2 instruments for the consolidation of systems selected and in a piloting phase, that will permit to cover the recurrent costs associated to the management and protection of natural resources (charge of entrance fees to protected areas, charge for pollution activities, user fees, voluntary contributions) *(Base line: in some protected areas there are entrance fees);* *b.* At the end of year 3, viability analysis and financing strategy for the establishment of a watershed trust fund *(Base line: does not exist at the beginning of the project);*	a. Document on a feasibility analysis of the Trust Fund and agreements for its creation and management b. Feasibility document and progress reports on its piloting	▪ The legal frameworks of the countries allow to establish the bi-national trust fund ▪ The institutions allocate human resources for piloting the strategies of financial sustainability
Activity 1.d: *Development of awareness and capitalization of knowledge related to the sustainable use and conservation of biodiversity, water, and soil*	a. At the end of the project, 20 primary and secondary schools in the basin participate in interactive programs of environmental awareness *(Base line: none one does this currently);* b. At the end of the project 100 indigenous youngsters (between 15 and 25 years of age) will have participated in horizontal activities and exchanges in traditional knowledge with grandparents of the community *(Base line: to be established during year 1);* c. At the end of year 1, there will be periodic newsletters, a web page (# of hits), and other means for the dissemination of results and lessons learned from the project *(Base line: none of the former currently exist);* d. At the end of the Project 10 actors of the Basin will have participated in different forums for the exchange of experiences in the management of basins and transboundary protected areas *(Base line: nobody from the basin assists to forums for sharing practical experiences in managing the basin in a binational manner);* e. 300 producers trained in techniques and successful experiences in organic-agroecological production and sustainable management of the RRNN *(Base line: to be established during year 1);*	a. Reports on the evaluation of results regarding the effectiveness of the awareness b. Oral reports of the beneficiaries c. Newsletters, Website, and other dissemination instruments d. Documents proving the participation in Basin Management Forums e. Reports on the attendance to forums f. Reports on the evaluation of results regarding the effectiveness of the training sessions	▪ Formal and informal educational sector, as well as the civil society are involved with the Project development ▪ Means of communication collaborate in the project's activities
<u>OBJECTIVE 2</u> To promote the adoption of productive models that are compatible with the conservation and sustainable use of the water and soil resources			
Activity 2.a: *Development of incentive mechanisms to promote environmentally sustainable productive practices*	*a.* At the end of the project, a code of good practices and certification mechanisms achieved with at least 3 associations of independent producers and 2 banana companies *(Base line: to be established during year 1);* *b.* At the end of year 3, incentives (prizes) of public recognition for the	a. Agreements with farmers and companies b. Evidence of granting of recognitions c. Memoirs of meetings and dialogues and manual of procedures of the credit entities d. Bi-national report on the feasibility of the	▪ Farmers, banana companies, the banking system, and credit programs can foresee benefits from their

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	adoption of good practices in the basin designed and/ or adapted *(Base line: no current public recognition exists regarding the use of sustainable practices);* *c.* As of the second year, the creation of a dialogue table with credit-financial institutions and/ or credit programs for the consideration of environmental criteria in the allocation of resources *(Base line: :no current dialogue with institutions / credit programs exists);* *d.* By the end of the project, instruments (legal-economic) of bi-national application developed for the reduction of contamination of the waters *(Base line: to be refined during year 1);* *e.* By the end of the project, a strengthened system for the application of incentives in the Basin established in the Law on the Use, Management, and Conservation of Soils (CR) and the General Environmental Law (PN) *(Base line: to be refined during year 1);*	instruments and action plan **e.** Application instruments published	participation in the project's activities ▪ International markets for purchasing environmental goods and services continue growing ▪ The government of Panama is willing to strength the legal framework for allowing the national payment system for environmental services to function ▪ Governments in both countries collaborate in the development and enactment of the legal framework, policies, and regulations for an integrated management of the Basin
Activity 2.b: *Promotion for the adoption and replication of sustainable productive practices*	*a.* By the end of the project, at least 200 small farmers would have participated in exchanges-visits to model farms in sustainable practices and integrated models *(Base line: to be established during year 1);* *b.* At the end of year 3, a seed fund to promote the adoption of sustainable practices that at the end of the project will benefit at least 150 new farmers that adopt or expand the surface destined to farming with friendly environmental or traditional practices *(Base Line: 1080 organic farmers – APTA members would benefit from this fund which does not exists-)* c. Pilot experiences implemented in the low basin to shift intense cultivations in the use of agrochemicals to more environmentally friendly production (at least 2,440 hectares, which represents a shift of 20% from the current extension of agro-chemically intensive production) *(Baseline: 12,200 hectares use agrochemicals*	a. Reports-memoirs of actions of horizontal training and evaluation of its effectiveness b. Financial fund reports and performance reports of the projects financed c. Field visits	▪ Private owners and farmers within the Basin perceive benefits derived from the development of activities of sustainable management ▪ Farmers perceive tangible benefits ▪ Co-financing is realized in an opportune manner

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	intensively); d. At least an additional 240 km2 of indigenous agro-forestry systems established, contributing to the consolidation of biological corridors *(Baseline: 1,200 hectares);*		
Activity 2.c: *Consolidation of an integrated water and soil monitoring system*	a. Elaboration of the water and soil quality baseline at the end of year one *(Baseline: does not exists);* b. Realization of at least one annual monitoring activity with community participation (as of year 3) *(Baseline: only limited monitoring activity is being done with community participation);* c. Bi-national Agrochemical Registration established at end of year 3 *(Baseline: no binational agrochemical registrys, only nationally);*	a. Base line published and updated in the Territorial Information System b. Operation reports and documents of the monitoring system c. Reports on the establishment of the registry	▪ Inhabitants, producers, associations perceive benefits from being involved in the bi-national water quality system ▪ Specific responsibilities are assigned by the institutions and other stakeholders to maintain and update the system
Activity 2 d.: *Enhancement of the functional land-use planning in the basin*	a. At least two Plans (or instruments of territorial-environmental management) are designed and approved by key institutions (Year 3) *(Baseline: no formal binational land use plan exists);* b. Management plans of at least two critical areas of the indigenous territories elaborated (year 2) and implemented by UA indigenous fostered by the project *(Baseline: management plans in indigenous territories are in incipient state);* c. Management Plan for the Basin formulated by the end of the Project *(Baseline: no binational management plan for the basin exists);*	a. Elaborated plans and acts of approval b. Elaborated plans and acts of approval	▪ Innovative mechanisms for maintaining the dialogue among institutions and indigenous communities are enhanced with the development of the project ▪ Stakeholders collaborate in the development and enactment of the legal framework, policies, and regulations for a functional territorial management.
Activity 2.f: *Improvement of micro-watershed management with community participation*	a. Inventory, diagnosis, and criteria for intervention at micro-watersheds elaborated at the end of year 3 *(Base line: does not exist at the beginning of the Project);* b. At least 3 participative projects of micro-watershed management at implementation level at the end of year 4 *(Base line: does not exist at the beginning of the Project);*	a. Report on inventory, diagnosis, and intervention criteria in micro-watersheds **b.** Progress Reports on the Project	▪ Participation of the communities and authorities responsible for the administration of aqueducts is achieved

NARRATIVE SUMMARY	VERIFIABLE OUTPUT INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
OBJECTIVE 3: To promote the conservation and sustainable use of globally important biodiversity			
Activity 3.a: *Harmonization and implementation of management plans of transboundary protected areas*	a. Legal and political framework for the co-management of transboundary protected areas defined and harmonized by the end of year 3 *(Base line: to be established at the beginning of the project);* b. At least two agreements of co-management of some sectors of the PILA elaborated, negotiated, and put into action with Indigenous Authorities by the end of the Project *(Base line: no formal co-management agreement exists in the basin);* c. Critical elements of the management plans of the transboundary protected areas are harmonized between both countries, including zoning and management criteria (with particular focus on border areas, indigenous areas and marine zones) *(Base line: PILA CR and PILA PN, Gandoca Manzanillo and San San-Pond Sak have separate management plans for each country, but they are not harmonized);* **d.** By the end of the Project 10% of the priority activities formulated in the Action Plans of PILA and Wetlands Bi-national Commissions (for example, joint monitoring and supervision) will have been put into action *(Base line: PILA CR and PILA PN, Gandoca Manzanillo and San San-Pond Sak have separate management plans for each country, but they are not harmonized);*	a. Report on the new legal/ political framework b. Agreement Document, management plan, and reports on advances c. Documents on harmonized criteria and zoning maps **d.** Progress reports on the implementation of the action plans	▪ Priority of the stakeholders in both countries continues with regard to the ERDS objectives in the Bi-national Sixaola River Basin ▪ Governments of both countries collaborate in the development and enactment of the legal framework, policies, and regulations for a joint management of the protected areas
Activity 3.b: *Establishment of an integrated monitoring system of terrestrial and aquatic biodiversity*	a. At the end of year 1, Baseline consolidated and monitoring system put in place jointly by both countries with stakeholder involvement (including harmonization of methods, databases) *(Base line: does not exist at the beginning of the Project);* b. At the end of the project, integrated monitoring system of biodiversity in operation with the participation of the stakeholders *involved (Base line: Partial monitoring of specific segments – eg. manatee – but not in a systematic and integrated manner);*	a. Use of base line information and registries of updating b. Monitoring reports on biodiversity	▪ Governments of Panama and Costa Rica adopt the same protocols in the monitoring of biodiversity with the support of environmental, organizations, indigenous, and other projects that operate in the basin.
Activity 3.c: *Promotion of ecosystem connectivity through biological corridors*	a. Action Plan prepared for the recovery of biological corridors carried out in a participative manner in both countries at the end of year 2 and approved by competent authorities in year 3. *(Base line: does not exist at the beginning of the Project);* b. At least 50 farmers located in critical areas for restoration are trained (horizontal workshops-training) and receive technical assistance and	a. Document of the Action Plan b. Training and pilot project reports	▪ Will and interest of the owners of the land to collaborate and provide a counterpart either in species or directly as a result of the benefits perceived

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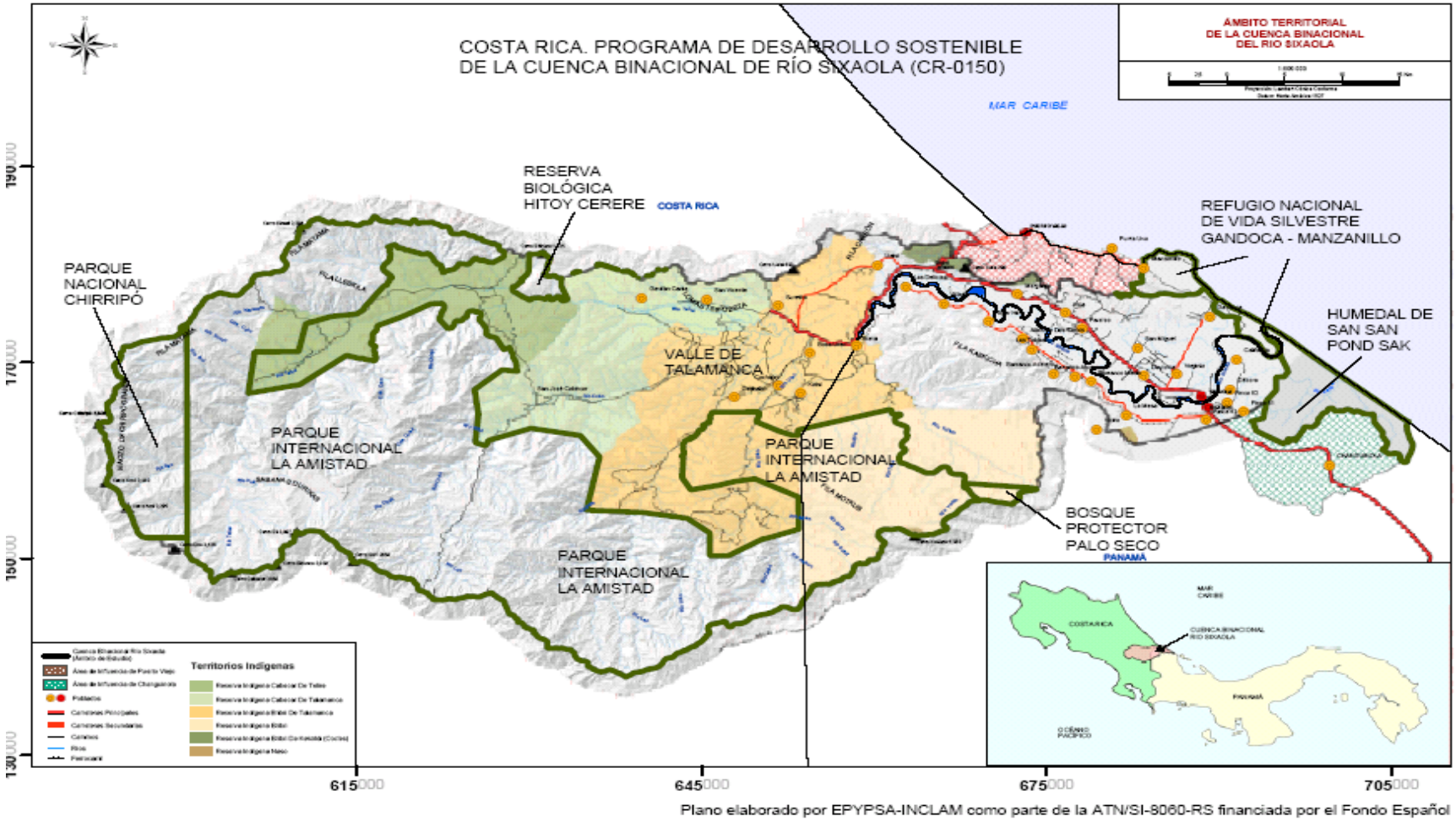
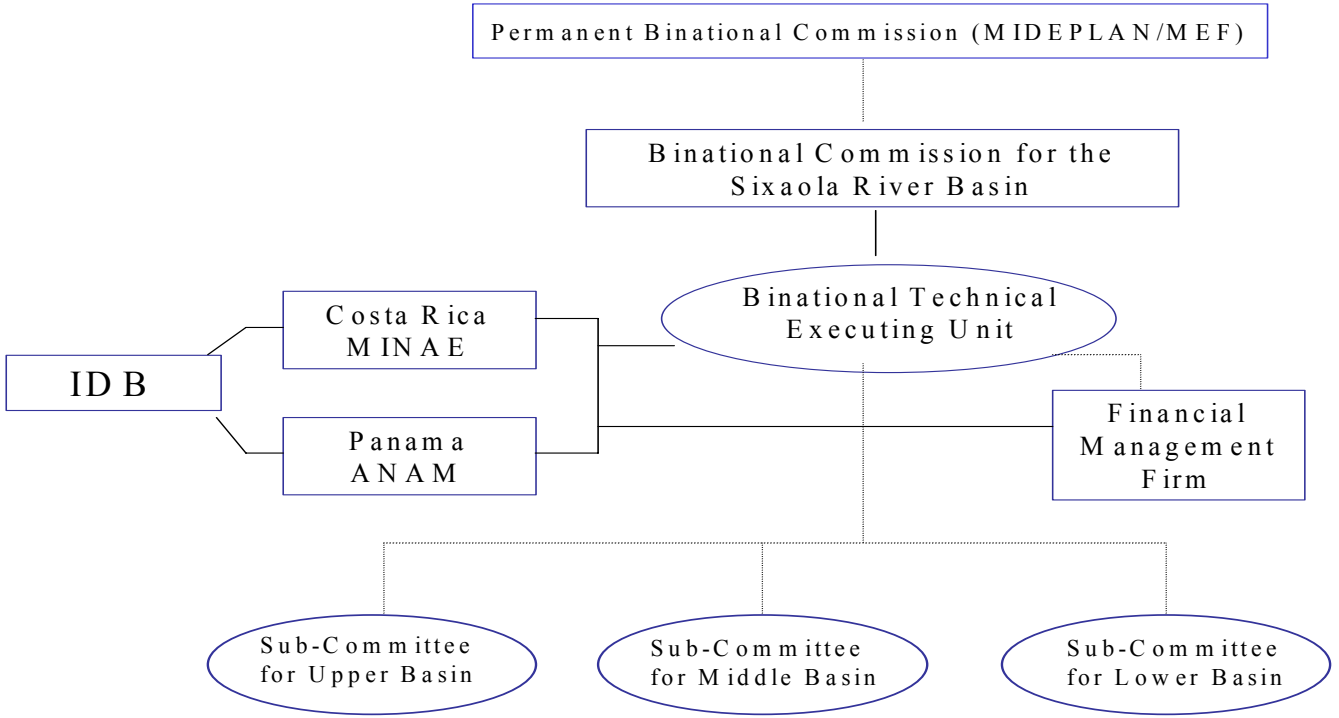
	support for restoration projects in riverbeds, critical areas, and biological corridors (at least 1 km^2) *(Base line: to be established during year 1);*		
Activity 3.d *Promotion of alternative livelihoods based on the sustainable use of biodiversity*	a. Systematized experiences in sustainable use of the biodiversity and its results diffused among the productive sectors in the Basin *(Base line: does not exist at the beginning of the Project);* b. Interactive guidelines on alternative livelihoods based on the sustainable use of biodiversity are prepared in a participative manner and at least 300 inhabitants of the Basin will have received practical training on their application *(Base line: does not exist at the beginning of the Project);* *c.* As of the third year, creation of a dialogue with credit- financial institutions and/ or credit programs for the development of innovative credit institutions to promote productive activities compatible with the sustainable use of biodiversity *(Base line: :no current dialogue with institutions / credit programs exists);* d. By the end of the project, at least 10 feasibility studies of initiatives proposed by beneficiaries interested in developing measures of alternative livelihoods based on the sustainable use of the biodiversity must have been made and the 5 most promising ones will have financing *(Base line: does not exist at the beginning of the Project);*	a. Public documents of the systematization b. Publishing of interactive guides and evaluation reports on the effectiveness of the training c. Memoirs of meetings and manual of procedures and new financial instruments d. Feasibility studies accessible to the public and reports on the advances of the projects	▪ Alternatives proposed on the sustainable use of biodiversity have an effective demand ▪ Credit sources with special conditions are available for producers which require financing their initiatives

Annex 3: Map of the Binational Sixaola River Basin



Annex 4: Project Execution Framework



Appendix A:
Incremental Cost Analysis

APPENDIX A: Incremental Cost Analysis

A. Background

1.1 The Binational Sixaola River Basin covers an area of 289,000 hectares that stretches from the Caribbean coastland to mountainous regions of Talamanca in Costa Rica and Central in Panama, reaching a maximum altitude of 3,820 meters above sea level. It hosts spectacular biodiversity and ecosystems of global importance. The Talamanca-Central mountain range contains at least 10% of the main habitat types of the planet and the mountainous region has been classified as one of the 200 global priority ecoregions.

1.2 Fifty percent of the basin has protected area status, of which several are of transboundary nature (La Amistad International Park - PILA, San San-Pond Sak and Gandoca Manzanillo). There are also six indigenous territories, four in Costa Rica (the indigenous reserves Bri Bri of Keköldi, Talamanca, Cabécar of Talamanca and Telire) and two in Panama (Bri Bri and Naso). The human population in the Basin is 33,500, of which 58% are indigenous, 38% ladinos and 4% afrodescendants.

1.3 The forests in the Basin capture an estimated 2,685 mm of precipitation on an annual basis, resulting in an average multiannual flow of 172 m^3/s, representing a volume of 5,456,000 m^3/year. While the water quality in the upper river basin is generally good, the waters in the middle and lower basin suffer from pollution mainly from agriculture (mainly agrochemicals) and human settlements, as well as sedimentation as a result of erosion due to land degradation in localized segments of the Basin.

1.4 In 1991, the Vice-presidents of the Central America countries signed Resolution No 4-91 agreeing to promote the development of transboundary areas in an effort to achieve regional integration. Further that year, the two governments signed an agreement on frontier protected areas, officially establishing the transboundary protected area of PILA, as well as the Costa Rica-Panama Border Cooperation Development Agreement. The latter agreement established a Permanent Binational Commission (headed by the Ministry of Economic Planning - MIDEPLAN in Costa Rica and the Ministry of Economy and Finance - MEF in Panama) with the mandate to promote an integrated Binational Sixaola River Basin Sustainable Management Program.

1.5 This ambition progressed and in 2003-2004 a Regional Strategy for the Sustainable Development (RSDS) of the Binational Sixaola River Basin was formulated in a participatory manner with the support of an IDB grant. The RSDS is conceived as a comprehensive effort on the part of both countries that considers short-, medium-, and long-range views and interventions in different areas: strengthening of the local/territorial management capacity, production diversification, natural resource management, vulnerability reduction, and basic infrastructure. The Bank has approved two related sustainable development programs (1439/OC-PN and 1556/OC-CR) to finance priority interventions in each country. Effective integrated management of the Basin and its ecosystems, however, requires additional support for which non-reimbursable GEF funding is requested. The following section summarizes the baseline situation.

B. Analysis of baseline situation

1.6 Although the overall environmental condition in the Binational Sixaola River Basin is relatively good, a series of emerging and interrelated problems affecting the biodiversity, water and soil resources are threatening the medium and long-term functional integrity of its ecosystems. Some of these threats appear to be relatively localized to certain segments of the Basin, but there is an eminent risk that these problems spread and worsen if priority and urgent actions are not taken.

1.7 A summary of the main direct threats to the integrity of Sixaola's biodiversity, land and water resources are as follows: (i) hunting and extraction of flora and fauna; (ii) over fishing and harmful fishing practices; (iii) logging; (iv) agricultural encroachment, inappropriate subsistence agricultural practices and large-scale commercial crops; (v) conversion of land to cattle ranching; and (vi) water pollution due to human and animal wastes, and agrochemical run-off.

1.8 These direct threats, which are present on both sides of the border, have their origin in the following set of interrelated root causes: (i) limited sustainable alternative livelihoods, (ii) unsustainable economic activities are poorly regulated, monitored and controlled, and (iii) institutional limitations to mainstream ecological management objectives within the development agenda, including budget constraints and lack of technical and operational capacities among all stakeholders. Furthermore, it is evident that a

situation involving two countries with parallel institutions with varying technical and operational capacities at the local level, three sub-basins (upper, middle and lower) with very different problems and realities, as well as interaction between multiple economic, social and ethnic sectors, demand an integral approach in order to respond effectively to this multifaceted situation. An analysis of prior and current project interventions, however, showed a tendency to focus on single productive sectors, ethnic groups, or areas, evidencing a failure to not fully take into consideration the interrelated nature of the problems in the basin.

1.9 In this context, *biodiversity loss* cannot be halted without addressing problems related to the need of increasing alternative livelihoods and sustainable economic activities. *Land degradation* processes cannot be reversed without ensuring proper land use, through the promotion of collaborative territorial management arrangements involving the local inhabitants and the institutions, which need to be technically and operationally strengthened, acting under the appropriate regulatory and incentive framework and guided by reliable information. The *integrity of the water system* of the Binational Sixaola River Basin can only be achieved if the forested lands are preserved and pollution levels are reduced, which requires effective mainstreaming of ecological considerations in the development of the basin. Long-term shifts in investments and expenditure by public national and local institutions, as well as private producers, in favor of measures that will counteract the emerging trends towards environmental degradation in the basin is required in order to prevent further negative impacts that are likely to be more costly to mitigate once they appear.

C. Analysis of GEF Alternative Scenario

1.10 The GEF Alternative will build upon and complement the ongoing programs and activities of the baseline scenario. Through the baseline activities alone it will not be possible to achieve a development that is consistent with the sustainable use and conservation of the Basin's biodiversity, land and water resources.

1.11 The Project has the objective to contribute to the sustainable use and conservation of biodiversity, water, and soil resources, through the creation of an enabling environment for the integrated and cross-cutting management of the Binational Sixaola River Basin.

1.12 The project will achieve this objective through a series of activities divided into three main components:

1.13 Component 1: Strengthening of institutional frameworks and technical and operational capacities required for integrated management. This component will be achieved through the following activities: (i) strengthen the technical and operational capacities of key stakeholders; (ii) strengthen the binational coordination frameworks; (iii) enhance sustainable financing for the management of the basin; and (iv) raise awareness and capitalize knowledge related to the sustainable use and conservation of biodiversity, water and soil resources.

1.14 *Component 2: Promotion of productive practices compatible with conservation and sustainable use of water and soil resources.* This component consists of the following activities: (i) develop incentive mechanisms to promote environmentally sustainable productive practices; (ii) promote the adoption and replication of sustainable productive practices; (iii) consolidate an integrated water and soil monitoring system; (iv) enhance functional land-use planning in the basin; and (v) improve the management of micro-watersheds with community participation

1.15 *Component 3: Conservation and Sustainable Use of Biodiversity*. This component will be achieved through the following activities: (i) harmonize and implement the management plans of the trans-boundary protected areas; (ii) establish an integrated monitoring system of terrestrial and aquatic biodiversity; (iii) promote ecosystem connectivity through biological corridors; and (iv) promote alternative livelihoods based on the sustainable use of biodiversity

1.16 The intervention will result in **global environmental benefits** within three of the GEF's focal areas. Specific benefits in ***biodiversity*** include, among others: enhanced conservation and sustainable use of species, protection of habitats, maintenance of ecological functions (such as gene flow), and protection of buffer zones and biological corridors. In terms of reducing ***land degradation***, the benefits include eliminating harmful practices thereby enhancing resilience and integrity of this ecosystem of global importance (promoting appropriate land use and reduction of soil erosion) and capitalization of traditional indigenous knowledge in sustainable land management. Specific benefits in ***international***

waters include reduction of contamination of the binational water body (sedimentation, liquid and solid wastes, and agrochemicals) and maintenance of hydrological functions. In accordance with the objectives of OP 12, the project will generate global benefits through an integrated approach to basin-wide management, thus securing long-term, cross-cutting, synergic, holistic and sustainable protection of the region's resources.

1.17 **National and regional benefits** include, among others: (i) improved technical and operational capacities of institutions, civil society organizations, local governments and indigenous authorities for integrated management, (ii) improved general environmental awareness among the stakeholders; (iii) improved environmental monitoring and enhanced access to environmental information systems to facilitate public and private investment decisions and planning, (iv) enhanced transboundary protected area management effectiveness, and (iv) alternative sources of funding for environmental management identified and leveraged. The project will also contribute to achieve regional objectives, related, for example to the consolidation of the Mesoamerican Biological Corridor and the implementation of the Mesoamerican Sustainable Development Initiative of the Plan Puebla Panama.

1.18 **Local benefits** include, among others: (i) improved alternative livelihood options and protein sources based on the sustainable use of biodiversity, land and water resources, (ii) improved local socio-economic conditions through reduced water pollution and land degradation, including reduced occurrence of gastrointestinal diseases for the population, (iii) improved access to water and sanitation facilities, (iv) reduced vulnerability to natural hazards through the regeneration of river banks and critical areas, (v) improved prospects for sustainable nature-based tourism, and (vi) increased capacity of national institutions to protect public goods against free riders will enhance the long-term carrying capacity of the Basin. The achievement of benefits at local and national levels will largely be financed by non-GEF co-financing.

D. Co-financing

1.19 The estimated total co-financing for the proposed Project is **US$15,875,000**, which will complement the GEF grant of US$3,500,000. The co-financing corresponds to loans from the Inter-American Development Bank (IDB) to Costa Rica and Panama and local counterpart funding. Associated funding of approximately US$980,000 is expected from The Nature Conservancy (TNC), Conservation International (CI) and the European Commission.

1.20 The Inter-American Development Bank is financing two programs which constitute co-financing of the GEF alternative[1]: (a) Sixaola Binational River Basin Sustainable Development Program in Costa Rica (1556/OC-CR) for a total of US$12,000,000 million with investments in the following areas: (i) environment and natural resources management and vulnerability reduction, (ii) productive diversification (iii) public services and basic infrastructure, and (iv) strengthening of management capacities at the local level, as well as at the basin and binational levels; and (b) Multiphase Program for Sustainable Development of Bocas del Toro in Panama (1439/OC-PN) for a total of US$16,900,000 million with investments in the following areas: (i) strengthening management capacities of local and provincial institutions and civil society organizations, (ii) sustainable management of natural resources and productive development, and (iii) basic services and transport infrastructure. These programs will provide important national and local benefits, which are complementary to the global environmental benefits generated by the GEF-financed activities[2].

1.21 During the PDF B phase, approximately US$980,000 in associated funding was identified as follows. TNC is supporting ANAM and MINAE in their work to strengthen the Binational Commission for PILA (estimated associated funding: US$420,000). This work includes formulation of management plans, monitoring of biodiversity, promotion of co-management schemes and capacity building of local guard and surveillance teams. In addition, the project promoted sustainable use of biodiversity, including hunting, fishing, tourism, medicinal plants, animal husbandry, and non-timber forest products. Another course of associated financing is from CI, which is financing a monitoring program for the manatee in San San Pond Sak, as well as a danta monitoring program in PILA and in the indigenous territories. CI also supports the connectivity of the Talamanca-Caribe Biological Corridor (estimated associated funding: US$360,000). Both, TNC and CI staff, have contributed to the current project

[1] Only the portions of these Programs directly applicable to the intervention are considered as co-financing

[2] Only the portions of these Programs directly applicable to the intervention are considered as co-financing.

design through their participation in preparatory workshops and planning meetings. It is expected that these institutions will be key partners during the execution of this project. Finally, it is expected that the European Commission will support the strengthening of the technical capacities of the municipality of Talamanca municipality in Costa Rica Corridor (estimated associated funding: US$200,000).

E. Analysis and Calculation of the Incremental Costs

1.22 A summary analysis of baseline and incremental costs is presented in Table 1.

Table 1

Component	Baseline[3]	Incremental	Total
1: Strengthening of institutional frameworks and technical and operational capacities required for integrated management	1,516,173	4,025,000	5,541,173
2: Promotion of productive practices compatible with conservation and sustainable use of water and soil resources	4,181,135	10,725,000	14,906,135
3: Conservation and Sustainable Use of Biodiversity	1,300,800	2,105,000	3,405,800
Other Costs	0	2,520,000	2,520,000
Totals	**6,998,108**	**19,375,000**	**26,373,108**

F. Alternative

1.23 A summarized analysis of the costs (values) represented under the baseline scenario and the incremental costs necessary to achieve globally important benefits pursued under the GEF alternative is presented in Table 2. For each component, the domestic benefits are analyzed, and then at the global level for both the baseline scenario and the GEF Alternative.

[3] The baseline costs were calculated on the basis of current and projected government expenditures in the Basin for the lifetime of the Project, as well as funds from other projects carried out by civil society and productive associations.

Table 2. Incremental Costs Matrix

Objective/Activity	Category	Cost US$	Local Benefits	Global Benefits
COMPONENT 1: Strengthening of institutional frameworks and technical and operational capacities required for integrated management	Baseline	1,516,173	Despite efforts to develop a Regional Sustainable Development Strategy for the basin, there is an apparent lack of functional binational institutional frameworks, as well as incipient technical and operational capacities of the involved local and regional authorities (including the indigenous ones), as well as civil society organizations, to effectively apply integrated management and planning practices in a coordinated and participatory manner.	The prospects for reducing land and water degradation and improving the conservation of globally important biodiversity will be constrained by the lack of a harmonized and integrated management framework for the Binational Sixaola River Basin.
	GEF Alternative	5,541,173	Technical and operational capacities of institutions, civil society organizations, local governments and indigenous authorities for integrated management improved. Improved access to environmental information systems and general awareness. Alternative sources of funding for environmental management identified and leveraged.	A model for binational basin management tested and lessons learned will be disseminated, including: integrated institutional frameworks, sustainable financing mechanisms. Improved capacities for integrated management of transboundary territories, in particular protected areas and indigenous territories. Capitalization of traditional indigenous knowledge.
	Total Incremental Cost	4,025,000	The GEF will cover 23% of the incremental costs under this component.	
	GEF	925,000		

Objective/Activity	Category	Cost US$	Local Benefits	Global Benefits
COMPONENT 2: Promotion of productive practices compatible with conservation and sustainable use of water and soil resources	Baseline	4,181,135	The two countries have some regulations with regards to promoting adequate land-use, but due to undeveloped complementary instruments, the application and enforcement is limited. Although some producers would benefit from access to credit and technical assistance for enhancing their productive performance, scarce opportunities for the majority of the actors will not allow for such a sustainable transformation, thus reducing the potential improvements in economic and environmental terms. The coverage of basic water and sanitation services is benefiting a limited segment of the population, with an increasing morbidity due to contaminated water.	In localized areas of the Basin economic activities will continue to be carried out by some actors (in particular indigenous communities) in way that is compatible with its ecological characteristics. However, due to a lack of regulatory, policy and management frameworks, including limited opportunities for co-management and local involvement, there is a risk that the pressure over the resources will turn unsustainable resulting in biodiversity loss, soil and water degradation.
	GEF Alternative	14,906,135	Reduced water pollution and soil degradation will improve local socio-economic conditions. Environmental monitoring will facilitate public and private investment decisions and planning. Local producers will diversify their production and participate in markets for organic products. A reduction on land-use conflicts. Water supply improved by the sustainable management of micro-watersheds. Improved access to water and sanitation facilities.	By contributing to a shift from unsustainable productive practices in the middle and lower basin towards sustainable use of environmental goods and services, ecosystem resilience and integrity will be improved, soil fertility and stability will be enhanced, and the environmental conditions and hydrological functions of the binational Sixaola River will improved. The effectiveness in applying binational instruments for pollution control will be demonstrated and replicated in other transboundary settings.
	Total Incremental Cost	10,725,000	The GEF will cover 12% of the incremental costs under this component.	
	Incremental Cost GEF	1,290,000		

Objective/Activity	Category	Cost US$	Local Benefits	Global Benefits
COMPONENT 3: Conservation and Sustainable Use of Biodiversity	Baseline	1,300,800	Under the current policy framework, the management of protected areas will continue to depend largely on public efforts and resources, with scarce opportunities for the participation of civil society. Although some producers may benefit from sustainable use of biodiversity such as eco-tourism and breeding of native species of flora and fauna for commercial use, limited market opportunities and incentives reduce the attractiveness of such options.	The emerging trends that threaten biodiversity, including hunting, illegal extraction, logging, degradation of aquatic habitats will continue to intensify and reduce the functional integrity of the Basin fragile ecosystems. Management plans for transboundary protected areas will continue to be developed and implemented independently, limiting potential synergies and management effectiveness.
	GEF Alternative	3,405,800	The local population in the Basin will benefit from an increase in alternative livelihood options and protein sources based on the sustainable use of biodiversity. Through the harmonization of management plans and binational collaboration, the effectiveness of transboundary protected areas management will increase. Regeneration of river banks and critical areas will reduce the vulnerability to natural hazards. The prospects of developing sustainable nature-based tourism will be improved.	The prospects for conserving globally important biodiversity will be increased through the implementation of innovative co-management models involving local populations, in particular indigenous communities, as well as enhanced connectivity through the consolidation of biological corridors. Biodiversity monitoring will facilitate global priority setting for conservation expenditures..
	Total Incremental Cost	2,105,000	The GEF will cover 29% of the incremental costs under this component.	
	Incremental Cost GEF	600,000		
Other costs	Baseline	0	N/A	N/A
	GEF Alternative	2,520,000	N/A	N/A
	Total Incremental Cost	2,520,000	These costs are associated with Project management.	
	Incremental Cost GEF	685,000		

Objective/Activity	Category	Cost US$	Local Benefits	Global Benefits
TOTALS	**Baseline**	**6,998,108**	**Includes activities carried out by government institutions, indigenous authorities and productive associations**	
	GEF Alternative	**26,373,108**	**Includes GEF funding, government co-financing from Costa Rica and Panama and co-financing from IDB-funded sustainable development programs in the Basin.**	
	Total Incremental Cost	**19,375,000**		
	Incremental Cost GEF	**3,500,000**	**Does not include US$500,000 from GEF PDB B**	

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Appendix C:
STAP Review

ANNEX C – STAP ROSTER REVIEW

STAP ROSTER TECHNICAL REVIEW OF THE PROPOSED GEF PROJECT: "*INTEGRATED ECOSYSTEM MANAGEMENT IN THE SIXAOLA BINATIONAL RIVER BASIN*" (COSTA RICA AND PANAMA)

by J. A. Thornton PhD PH CLM
Managing Director
International Environmental Management Services Ltd – United States of America

Introduction

This review responds to a request from the Inter-American Development Bank (IDB) to provide a technical review of the proposed Multifocal Area GEF project entitled *Integrated Ecosystem Management of the Sixaola Binational River Basin*.

I note that I am a designated expert on the STAP Roster of Experts with particular experience and knowledge concerning lake and watershed management. I have served as Government Hydrobiologist with the Zimbabwe Government, Chief Limnologist with the South African National Institute for Water Research, Head of Environmental Planning for the City of Cape Town (South Africa), and, most recently, as Principal Environmental Planner with the Southeastern Wisconsin Regional Planning Commission, a position that I hold concurrent with my position as Managing Director of International Environmental Management Services Ltd, a not-for-profit corporation providing environmental education and planning services to governments worldwide. In each of these positions, I have had oversight of projects and programs designed to manage multiple water uses in complex basins, and to develop appropriate and affordable measures to maximize human use of, while minimizing human impacts on, the aquatic environment. I am a licensed Professional Hydrologist in the State of Wisconsin and a North American Lake Management Society Certified Lake Manager.

This review is based upon a thorough review of the project document, consisting *inter alia* of the Project Executive Summary (16 pages), the Project Document (30 pages), Annexes A (Incremental Cost Analysis), B (Logical Framework), E (the Tracking Tools for GEF Biodiversity Focal Area Strategic Priorities One and Two), F (Monitoring and Evaluation Plan), and 3 (Map of the Sixaola Binational River Basin). Other, relevant documents served as reference sources, including the GEF *Operational Strategy*, *Agenda 21*, and related materials.

Scope of the Review

This review addresses, *seriatim*, the issues identified in the Terms of Reference for the Scientific and Technical Appraisal Panel (STAP) Review.

Key Issues

Key issue 1. Scientific and technical soundness of the project. The proposed program sets forth a series of related but different and appropriate interventions within the three hydrologically linked areas of the Basin. It includes actions designed to: empower previously disadvantaged communities in the upper portions of the Sixaola River Binational Basin, providing alternative livelihoods for indigenous communities within and adjacent to protected mountainous areas and reserves; develop appropriate agriculture in the middle portions of the basin where inappropriate and unsustainable land management measures are contributing to serious land degradation and water pollution; and reduce dependency on synthetic organic chemicals used in agriculture within the heavily farmed lower portions of the river basin. These actions are supported by related programs of institutional strengthening and capacity, focused on the management of natural reserves and globally significant protected areas in the headwaters of the Sixaola River Binational Basin, and on the empowerment of the indigenous communities forming the population of these areas. Related programs of institutional strengthening and capacity building support agricultural extension in the largely agricultural and urbanising lower and middle portions of the basin. In all three sub-basins, identified stakeholders are proposed to be involved in decisions relating to alternative livelihoods, land management, and economic development, the latter based upon sustainable alternatives to those practices currently being implemented within the Basin. The project builds on the findings and achievements of the project development activities, having clearly defined (quantitative) and achievable goals—the only possible exception to this being the water quality goal which suggests that the Index of Biotic Integrity (IBI) score for the system could be improved from a "good" rating of 3 to a "very good" rating of 4. In this reviewer's experience, such scores are very difficult to shift, especially if the basis for the current score in heavily influenced by the natural state of the stream system (and only influenced in a relatively minor way by the anthropogenic impacts). Maintaining an IBI rating of "good" should not be viewed as a failure on the part of the project, while improving the IBI rating to "very good" would clearly be an indication of exceptional performance. In any event, reducing or containing the inappropriate land usage within the upper and middle subbasins, and a reduction in the use of synthetic organic chemicals in the lower subbasin, should maintain or improve the IBI score in a measurable way, especially in the longer term. Goals are established for the short (project mid-term review), moderate (end of project), and longer term (three years after the end of the project). The incremental nature of the proposed interventions is clearly established and linked to the transboundary and inter sub-basin transfer of contaminants and impacts of land degradation. In the upper sub-basin, these interventions are clearly linked to protection of biodiversity in established natural areas and binational reserves, all of which are identified by global programs and conventions as areas of significant concern. In these areas, the project builds on complementary interventions and involvements by nongovernmental (including Conservation International, CI, and The Nature Conservancy, TNC) and governmental and intergovernmental (binational commission) partners. IDB cofinancing and governmental support of the project is clearly identified and allocated in an appropriate manner.

Key issue 2. Identification of global environmental benefits and/or drawbacks of the project, and consistency with the goals of the GEF. The proposed project addresses the major causes of environmental stress within the aquatic environment of the Sixaola River system and its tributary streams, flowing into the Caribbean Sea. While the nearshore marine linkage is not well developed, the benefits of the implementation of sound river basin management practices are identified. Consequently, the water quality benefits proposed to be achieved within the Binational Basin will be transferred to the coastal zone and associated Large Marine Ecosystem (LME). Both land and water resources within the Sixaola River Binational Basin have been identified as being at risk, with concomitant impacts on biodiversity. Specific provision in the project is made for the improvement of existing environmentally protected areas and consideration of creation of new protected areas within the Basin. Given the globally significant headwater areas and reserves that comprise the headwaters, the project has clearly described and identified global benefit. Further, given the watershed based approach to managing the Binational Basin, the project clearly fits within the GEF multiple focal area operational program (OP 12), and meets the requirements established for integrated river basin management under the applicable Millennium Goals and related conventions and instruments. Clear linkages between this project and ongoing and related GEF and other initiatives in Central America and the Caribbean are identified, and mechanisms identified to promote replication (through liaison with, *inter alia*, the GEF-supported IW:LEARN project—in this regard, further linkage and information dissemination through the regional Inter-American Water Resources Network, IWRN, operated with the technical support of the Organisation of American States, OAS, is recommended).

Key issue 3. Regional context. The participation in this project of both riparian countries, and related jurisdictional units, argues persuasively that adequate and appropriate consideration has been given to the regional context of the project. Strengthening and institutional development of the existing Binational institutions responsible for the management of the headwater protected areas (including the management agency of the La Amistad International Park, PILA, and the Binational Commission for the Sixaola River Basin established pursuant to the Costa Rica-Panama Border Development Cooperation Agreement) firmly establishes the regional provenance of the project.

Key issue 4. Replicability. The project document clearly identifies the relevant regional and national policies, programs and legal/administrative frameworks within which the project is to be conducted. These frameworks appear to fully support the project goals and objectives and should sustain and replicate the project activities. Where there are weaknesses identified in these policies and strategies, the project proposes to strengthen institutions and build capacities to enhance the ability of the countries to fulfill their obligations with respect to management of the shared transboundary resource and adjacent coastal marine waters. Further, the project has a clear plan for community and stakeholder involvement and participation, including the active involvement of previously disadvantaged groups, women and indigenous peoples. Beyond the limits of the Basin, the project has identified appropriate mechanisms for the dissemination of lessons learned (see the note above regarding inclusion of the IWRN as a regional

mechanism for dissemination of lessons learned). These linkages are important elements for the potential replicability of the project.

Key issue 5. Sustainability of the project. The aspect of sustainability addressed in various and appropriate ways within the project document. Key to the sustainability of the project is the active involvement and participation of stakeholders in each of the three major subbasins. Of particular note is the involvement of communities in the development of sustainable alternatives to current unsustainable economic development practices within the watershed. Where these practices are historically established, and hence virtually impossible to shift in any significant way (e.g., in the lower subbasin), practical and practicable measures are proposed to reduce the current levels of negative impact created by these economic activities. Elsewhere, implementation of sustainable alternatives, through provision of relevant extension services, training programs, and institutional strengthening as well as community-based application of alternative practices, is designed to provide for the future economic growth of the basin communities in a manner likely to protect and preserve the natural resource base of this environmentally sensitive Binational Basin. In this way, and with the participation of existing agencies and institutions within the basin, appropriately strengthened through targeted training and institutional development activities included within the scope of the proposed project, the project team has ensured the sustainability of the project supported interventions to the fullest extent practicable and possible.

Key issue 6. Targeted Research Projects. Successful practices, well documented, will become the basis for replication elsewhere in the BInational Basin and add to the existing best management practices data base being compiled by the GEF-IW focal area within the IW:LEARN program. It is essential that the lessons learned be well documented, that that both success and failure of specific management measures be recorded. In the realms of river basin management, knowledge of what has failed to work is equally as valuable as knowledge of those measures that have proven successful. To this end, the inclusion of environmental monitoring activities within the project will provide the technical and scientific documentation necessary to clearly demonstrate the benefits of interventions and share those outcomes with other river basin managers and basin management authorities worldwide.

Secondary Issues

Secondary issue 1. Linkage to other focal areas. This project is formulated as a Multifocal Area project under OP 12 (Integrated Ecosystem Management) of the GEF *Operational Strategy*. The project has been specifically linked to the international waters, biodiversity and land degradation focal areas. These linkages are well developed and fully justified. The proposed project also has a clear linkage to the Global Program of Action for the Prevention of Marine Pollution from Land-Based Activities.

Secondary issue 2. Linkages to other proposals. The project recognizes the complementarities between the implementation of the strategic actions and related

initiatives being carried out in the Central American region. Specifically, the project proposes to develop strong linkages with related GEF-funded programs in the Region, and with ongoing initiatives being carried out by other donors, such as the TNC, CI, and European Union (EU) during the execution of the project. Linkages with the GEF-supported San Juan River Basin project, conducted in the binational basin shared by Costa Rica and Nicargua, also should be pursued as the lessons learned may enhance the potential for success of the Sixaola River Basin program.

Secondary issue 3. Other beneficial or damaging environmental effects. The project has no known or obvious damaging environmental impacts associated with the activities proposed to be executed. The beneficial impacts of the project have been fully identified in the project documents.

Secondary issue 4. Degree of involvement of stakeholders in the project. Stakeholder involvement includes involvement by appropriate governmental agencies, private sector operators, and civil society organizations. The active involvement and participation of these stakeholders was a key feature of the project development activities. This level of involvement and participation is proposed to be continue during the project.

Secondary issue 5. Capacity building aspects. Capacity building and institutional strengthening is focused on the existing agencies and entities at both the binational and national levels. Capacity building is indicated for both the binational management agencies for the transboundary park(s) and park staff, with related strengthening of the associated national agencies of both countries. Informational programming is indicated to enahnce the participation of local stakeholders in the project. Further, the dissemination of knowledge and information within the Binational Basin, the Latin American and Caribbean Region, and beyond (through mechanisms such as IW:LEARN) are clearly included within the scope of the project.

Secondary issue 6. Innovativeness. Development of appropriate management practices for the integrated management of river basin within the context of its watershed is a continuing process in much of the world. In particular, the issue of headwater protection, identified in the project document, is an area where this project could demonstrate innovation that would potentially result in not only new approaches but also to eminently transferable approaches to addressing this concern.

General Conclusion and Recommendations

Overall, it is the conclusion of this reviewer that the proposed project, *Integrated Ecosystem Management of the Sixaola Binational River Basin*, is broadly and wholly consistent with the GEF Multifocal Area Operational Program 12 (Integrated Ecosystem Management), its broader philosophy, and funding criteria. Consequently, this reviewer recommends this project for funding under OP 12 of the GEF Operational Strategy.

Appendix C1:
Response of the Executing Agency to STAP Review

INTEGRATED ECOSYSTEM MANAGAMENT IN THE SIXAOLA BINATIONAL RIVER BASIN
(RS-X1017)

ANNEX C1 – RESPONSES BY THE EXECUTING AGENCY TO THE STAP REVIEW

STAP Comment 1: The project builds on the findings and achievements of the project development activities, having clearly defined (quantitative) and achievable goals—the only possible exception to this being the water quality goal which suggests that the Index of Biotic Integrity (IBI) score for the system could be improved from a "good" rating of 3 to a "very good" rating of 4. In this reviewer's experience, such scores are very difficult to shift, especially if the basis for the current score in heavily influenced by the natural state of the stream system (and only influenced in a relatively minor way by the anthropogenic impacts). Maintaining an IBI rating of "good" should not be viewed as a failure on the part of the project, while improving the IBI rating to "very good" would clearly be an indication of exceptional performance. In any event, reducing or containing the inappropriate land usage within the upper and middle subbasins, and a reduction in the use of synthetic organic chemicals in the lower subbasin, should maintain or improve the IBI score in a measurable way, especially in the longer term.

ExA Response 1: Albeit its limitations (as indicated above), the Index of Biotic Integrity (IBI) has been selected because it is one of the few indicators on water quality that is actually being monitored in the Basin. We would therefore propose to keep this indicator, although with the adjustment to maintain level 3 rather than increasing to level 4. In addition, however, during the project start-up phase, possible complimentary and cost-effective water quality indicators will also be considered.

STAP Comment 2: While the nearshore marine linkage is not well developed, the benefits of the implementation of sound river basin management practices are identified. Consequently, the water quality benefits proposed to be achieved within the Binational Basin will be transferred to the coastal zone and associated Large Marine Ecosystem (LME).

ExA Response 2: In Component 3 (*harmonize and implement the management plans for the transboundary protected areas*), activities will be added to improve the binational management of the marine areas associated with the coastal transboundary protected areas of Gandoca Manzanillo (Costa Rica) and San San-Pond Sak (Panama), including development of a harmonized zoning scheme, management criteria and water quality and biodiversity monitoring.

STAP Comment 3: Clear linkages between this project and ongoing and related GEF and other initiatives in Central America and the Caribbean are identified, and mechanisms identified to promote replication (through liaison with, *inter alia*, the GEF-supported IW:LEARN project—in this regard, further linkage and information dissemination through the regional Inter-American Water Resources Network, IWRN, operated with the technical support of the Organisation of American States, OAS, is recommended).

ExA Response 3: In Component 1 (*raise awareness and capitalize knowledge related to the suatainable use and conservation of biodiversity, water and soil*) further linkages and information dissemination will be ensured through the regional Inter-American Water Resources Network, IWRN, operated with the technical support of the Organisation of American States, OAS.

STAP Comment 4: Linkages with the GEF-supported San Juan River Basin project, conducted in the binational basin shared by Costa Rica and Nicaragua, should also be pursued as the lessons learned may enhance the potential for success of the Sixaola River Basin program.

ExA Response 4: In Component 1 (*raise awareness and capitalize knowledge related to the sustainable use and conservation of biodiversity, water and soil*) linkages with the GEF-supported San Juan River Basin project will also be promoted, including exchanges amongst the involved stakeholders.

STAP Comment 5: Development of appropriate management practices for the integrated management of river basin within the context of its watershed is a continuing process in much of the world. In particular, the issue of headwater protection, identified in the project document, is an area where this project could demonstrate innovation that would potentially result in not only new approaches but also to eminently transferable approaches to addressing this concern.

ExA Response 5: In Component 1 (*raise awareness and capitalize knowledge related to the sustainable use and conservation of biodiversity, water and soil*) lessons learned in headwater protection, among others, will be shared with other projects and initiatives.

Appendix D: Copies of Endorsement Letters GEF Focal Points

MINISTERIO DEL AMBIENTE Y ENERGÍA
DESPACHO DEL MINISTRO

San José, March 20, 2006
PF-FMAM-004-RU-2006

Dr. Leonard Good
CEO
Global Environment Facility
Washington D.C.

Dear Mr. Good:

On my capacity as GEF Focal Point, I hereby confirm the support of the Government of Costa Rica to continue actions related to the project titled "Integrated Ecosystem Management in the Binational Sixaola River Basin" (**GEFSEC Project ID**: 2517).

In this regard, we will highly appreciate continuing the process of approval by the relevant GEF authorities.

Sincerely yours

Ricardo Ulate Chacón
Advisor
GEF Focal Point

C. Lic. Carlos Manuel Rodríguez E. Ministro MINAE
Henrik Franklin, Robert Kaplan, IADB
Lesbia Sevilla, SINAC

Tel:/Phone (506) 257 8475 or 394 2971 Fax: (506) 258 1614 or 257 9695
Email: rulate@fonafifo.com or rulate@costarricense.cr

autoridad nacional del ambiente

Administración General
Tel: (507) 315-0855 / 56
Fax: (507) 315-0663

Panamá, 8 de marzo de 2006
AG-0477-2006

Su Excelencia
RICAURTE VÁSQUEZ
Ministro
Ministerio de Economía y Finanzas
E. S. D.

Señor Ministro Vásquez.

En el marco del Convenio sobre Cooperación para el Desarrollo Fronterizo Panamá - Costa Rica en febrero de 2005, el Banco Interamericano de Desarrollo (BID) informo la aprobación de fondos GEF por un monto de USD $ 300,000.00, para la preparación y formulación del Proyecto PDF-B Manejo Integrado de Ecosistemas de la Cuenca Binacional del Río Sixaola (GEF-BID, ATN/TM-9072-RS). El mismo será sometido a la consideración del Fondo para el Medio Ambiente Mundial (GEF) dentro del Programa de Operación N° 12 Gestión Integrada de los Ecosistemas.

Este proyecto, pretende apoyar las siguientes áreas de acción:

- Creación de la capacidad de gestión para el manejo integrado de la cuenca binacional del Río Sixaola.
- Manejo integrado de suelos y agua.
- Uso y conservación de la biodiversidad

Dado que en este mes se termina el PDF-B para su presentación al BID y al GEF, para su aprobación, la ANAM desea manifestar la no objeción al proyecto en mención, en vista de que esta iniciativa concuerda con los lineamientos estratégicos de nuestra Institución (la política de recursos hídricos, forestal y el Sistema Nacional de Áreas Protegidas). Por tal motivo solicitamos respetuosamente transmitir su apoyo y el interés del país de participar en dicho proyecto.

Atentamente,

LIGIA CASTRO DE DOENS
Administradora General

ADMINISTRACIÓN GENERAL
República de Panamá

lcdoens/cvm

"CONSERVACION PARA EL DESARROLLO SOSTENIBLE"

Tel:/Phone (506) 257 8475 or 394 2971 Fax: (506) 258 1614 or 257 9695
Email: rulate@fonafifo.com or rulate@costarricense.cr

Appendix E1:
BD-1 “Catalyzing Sustainability of Protected Areas” GEF Tracking Tool

GEF

Integrated Ecosystem Managament in the Binational Sixaola River Basin (RS-X1017)

Appendix E1: Tracking Tool for GEF Biodiversity Focal Area Strategic Priority One: "Catalyzing Sustainability of Protected Areas"[1]

[1] This is a translation from Spanish.

Section One: Project General Information

1. Project name:

Integrated Ecosystem Management of the Sixaola Binational River Basin

2. Country (ies):

Costa Rica and Panama

National Project:_____ Regional Project **X** Global Project:_____

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

	Name	Title	Agency
Work Program Inclusion	1. Nelson Elizondo Torres 2. Benigno Villamonte 3. José Masif 4. Hernández Bonilla **(in consultation with consultant team and the IDB)**	1. Director PILA Costa Rica 2. Director PILA Panama 3. Director. Gandoca Manzanilla Wildlife Refuge (Costa Rica) 4. Director San San Pond Sak RAMSAR Site (Panamá)	1. MINAE-SINAC 2. ANAM 3. MINAE-SINAC 4. ANAM
Project Mid-term			
Final Evaluation/project completion			

4. Funding information

GEF support:_____3.500.000___
Co-financing:_____15,875,000___
Total Funding:_____19,375,000___

5. Project duration: ***Planned*** **4** years ***Actual*** _____ years

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

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

INTER-AMERICAN DEVELOPMENT BANK (IDB)

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

Other Operational Program not listed above:_____

8. Project Summary (one paragraph):

The proposed Project will contribute to address a series of interrelated and emerging threats to the biodiversity, water and land resources in the Sixaola Binational River Basin shared by Costa Rica and Panama. This will be achieved by promoting an integrated ecosystem management approach, involving and empowering stakeholders in the two countries. The proposal is consistent with the *Regional Sustainable Development Strategy (RSDS) for the binational Sixaola River Basin* which has been formulated jointly and in a participatory manner by the involved stakeholders. The Strategy will be implemented through two national programs, the *Sustainable Development Program of Bocas del Toro* in Panama, and the *Sustainable Development Program for Sixaola* in Costa Rica, both financed by loans from the Inter-American Development Bank. The GEF resources will serve to cover the incremental costs related to the global benefits of integrated management of the Basin, and each national program will serve to cover the investments necessary to create a true, sustainable development model for the benefit of local populations as well as the two countries as a whole.

9. Project Development Objective:

Contribute to the improvement of the health and integrity of the ecosystems, as well as the wellbeing of the population in the Sixaola Binational River Basin

10. Project Purpose/Immediate Objective:

Contribute to the sustainable use and conservation of biodiversity, water, and soil resources, through the creation of an enabling environment and integral, cross-cutting management of the Sixaola Binational River Basin

11. Expected Outcomes (GEF-related):

The project consists of three Outcomes as follows:

Outcome 1: strengthen the binational institutional framework for integrated basin management and enhance the required technical and operational capacities of the involved institutions, indigenous organizations, and civil society organizations

Outcome 2: promote the adoption of productive models that are compatible with the conservation and sustainable use of the water and soil resources

Outcome 3: promote the conservation and sustainable use of globally important biodiversity.

12. Types of Protected Area Activities Supported:

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

X Enabling Environment (please check each activity below)

X Policy, legislation, regulation

X Capacity building
Capacity building budget:____560.000 US$ (of the GEF resources)

(Please record budgets for capacity building if they are clearly identified as a discrete budget line.)

The technical and operational capacities of the regional branches of eight key public institutions involved in the management of the basin will be strengthened in the following manner: (i) based on existing strengthening plans[2]; the technical and operational capacities of MINAE and ANAM will be strengthened, particularly in the areas of water pollution control and protected area management, both through on-the-job training of technical staff and the provision of monitoring, mobilization, communication and surveillance

[2] In the case of MINAE, the recent recommendations from the General Controllers Office, as well as the Financial Strategy for the PILA, will be followed. In the cases of ANAM y MIDA, the IDB-funded 1439/OC-PN Program has elaborated a strengthening plan.

equipment[3]; (ii) technical staff from MAG-MIDA and the respective Ministries of Health will receive practical training on the control of agro-chemical use, and equipment will be provided for the establishment of a modern binational agro-chemical registry; (iii) technical staff of MAG-MIDA, the Municipalities of Talamanca and Changuinola and ANAM will receive practical training on land-use planning[4]; and (iv) installation of the Territorial Information System[5] (incl. basic hardware and software that enables inter-institutional communication).

Recognizing the need for enhanced capacities amongst social actors to actively participate in the sustainable management of natural resources, the following activities will be financed: (i) facilitating the development of environmental management capacities of the Indigenous Authorities[6]; (ii) technical training of personnel from aqueduct associations (ASADAS) in watershed management practices; and (iii) awareness raising of local actors (civil society, indigenous communities) on the legal and regulatory framework for natural resources management, as well as practical training on participatory environmental monitoring, conflict resolution and surveillance.

X Education and awareness raising
X Institutional arrangements
X Finance and incentives
_ **X** Replication and scaling up
X 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:

647,444 tons CO_2

[3] It is expected that this equipment will be managed by ANAM and MINAE, but part of the equipment will likely also be used by local actors involved in monitoring and surveillance activities.

[4] Including awareness raising on the existence and utility of the Indicative and Functional Land Use Plan developed during the formulation of the RSDS), in particular methodologies for the development and application of corresponding management, legal and regulatory instruments.

[5] The Territorial Information System was designed as a strategic planning tool during the formulation of the RSDS.

[6] Including technical capacity building that embraces traditional knowledge and methods, as well as the introduction of pertinent outside approaches, and the provision of basic equipment required for the functioning of environmental units. These activities will be coordinated with the Integrated Ecosystem Management in Indigenous Communities Project.

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**
Hectares of restored landscape contributing to biological corridors	100 ha.		
Hectares of new indigenous agroforestry systems	240 ha		
Hectares of agro-chemically intensive agriculture shifted to sustainable production	2,400 ha		
Protected area co-management contracts under operation	2		

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

____national protected area system

14.b. The level of the intervention is:

____ global

_ **X** ___regional

____national

____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**
Gandoca-Manzanillo National Wildlife Refuge	Land: 4,900 Ha Sea: 4,500 Ha		
San San-Pond Sak Wetland of International Importance	Land: 22,000 Ha* Sea: 4,500 Ha		
La Amistad International Park (PILA) CR	Land: 115,251 Ha**		
La Amistad International Park (PILA) PN	Land: 16,836 Ha**		

* Counting both inside and outside Basin borders

** Only counting portion within the Basin as direct interventions will be focused there (the other portion of the protected area will indirectly benefit from harmonization efforts)

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

Name of Protected Area	**Is this a new protected area? Please answer yes or no.**	**Area in Hectares**	**Global designation or priority lists (E.g., Biosphere Reserve, World Heritage site, Ramsar site, WWF Global 200, , etc.)**	**Local Designation of Protected Area (E.g, indigenous reserve, private reserve, etc.)**	**IUCN Category for each Protected Area[7]**					
					I	**II**	**III**	**IV**	**V**	**VI**
Gandoca-Manzanillo Wildlife Refuge (RAMSAR Site)	No	4,876	RAMSAR	National Wildlife Refuge					x	
San San Pond Sak Wetland of International Importance	No	20,025	RAMSAR	Wetland of International Importance						x
La Amistad International Park (PILA) Costa Rica	No	174,881	Biosphere Reserve and World Heritage Site	National Park		x				
La Amistad International Park (PILA) Panama	No	207,000	Biosphere Reserve and World Heritage Site	National Park						

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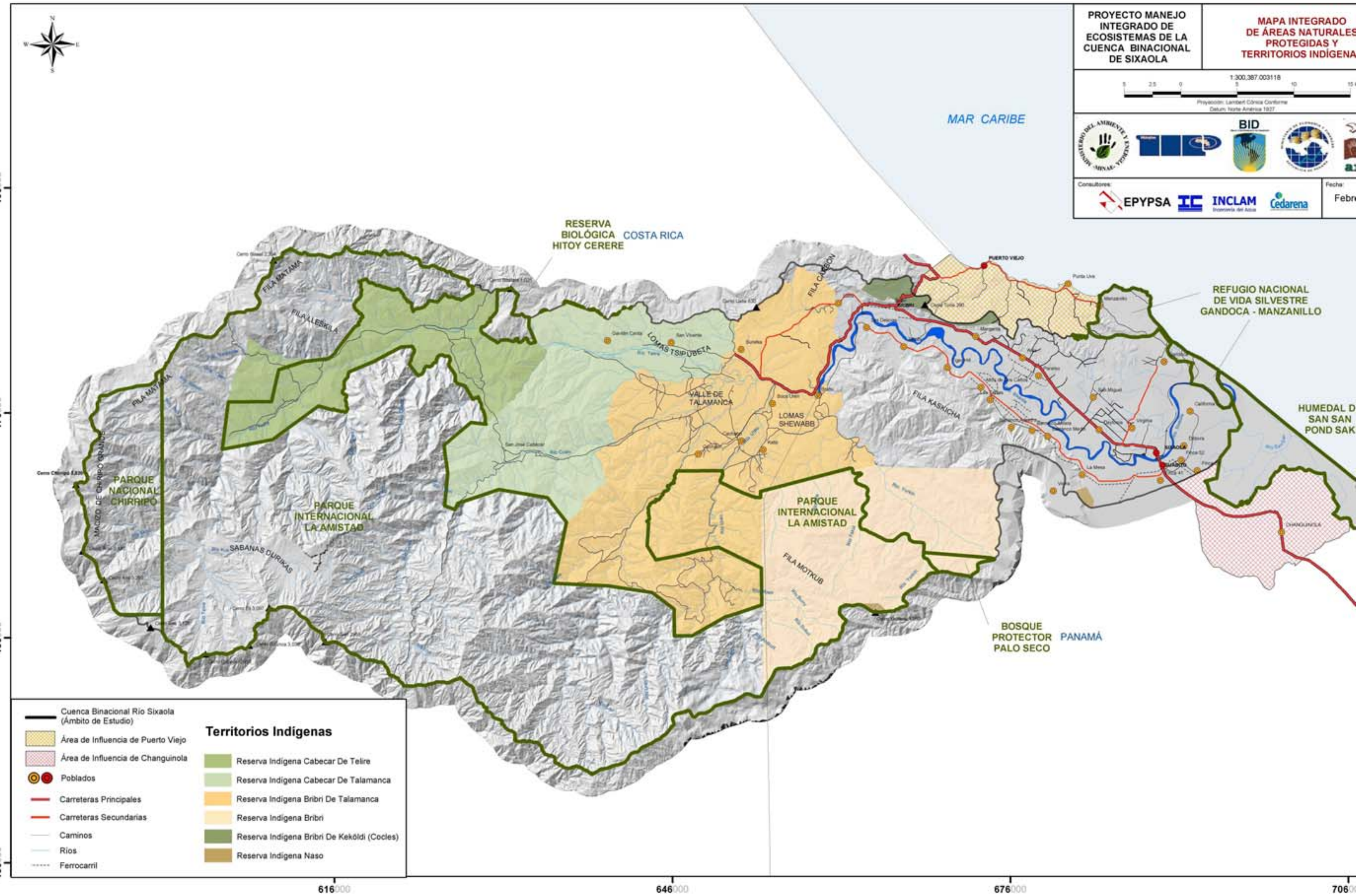
I. Strict Nature Reserve/Wilderness Area: managed mainly for science or wilderness protection
II. National Park: managed mainly for ecosystem protection and recreation
III. Natural Monument: managed mainly for conservation of specific natural features
IV. Habitat/Species Management Area: managed mainly 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


PROYECTO MANEJO INTEGRADO DE ECOSISTEMAS DE LA CUENCA BINACIONAL DE SIXAOLA
MAPA INTEGRADO DE ÁREAS NATURALES PROTEGIDAS Y TERRITORIOS INDÍGENA
BID
EPYPSA
INCLAM
Cedarena
MAR CARIBE
RESERVA BIOLÓGICA HITOY CERERE
COSTA RICA
REFUGIO NACIONAL DE VIDA SILVESTRE GANDOCA - MANZANILLO
HUMEDAL D SAN SAN POND SAK
PARQUE NACIONAL CHIRRIPÓ
PARQUE INTERNACIONAL LA AMISTAD
PARQUE INTERNACIONAL LA AMISTAD
BOSQUE PROTECTOR PALO SECO
PANAMÁ
VALLE DE TALAMANCA
LOMAS SHEWABB
LOMAS TSIPUBETA
FILA KASKICHA
FILA MOTKUB
SABANAS DURIKAS
FILA MATAMA
PUERTO VIEJO
190000
170000
150000
130000
616000
646000
676000
706000
Cuenca Binacional Río Sixaola (Ámbito de Estudio)
Área de Influencia de Puerto Viejo
Área de Influencia de Changuinola
Poblados
Carreteras Principales
Carreteras Secundarias
Caminos
Ríos
Ferrocarril
Territorios Indígenas
Reserva Indígena Cabecar De Telire
Reserva Indígena Cabecar De Talamanca
Reserva Indígena Bribri De Talamanca
Reserva Indígena Bribri
Reserva Indígena Bribri De Kekoldi (Cocles)
Reserva Indígena Naso

Section Two: Site-Level Management Effectiveness Tracking Tool for Protected Areas

Reporting Progress in Protected Areas: Data Sheet 1

Name of protected area	Gandoca-Manzanillo National Wildlife Refuge (REGAMA)	
Location of protected area (country, ecoregion, and if possible map reference)	Salamanca Ecoregion, Southeast Costa Rica (Limon Province)	
Date of establishment (distinguish between agreed and gazetted*)	Agreed Executive Decree #16614-MAG 29/10/85	Gazetted Gazette # 206 of 29/10/1985
Ownership details (i.e. owner, tenure rights etc)	Private properties and State	
Management Authority	La Amistad-Caribbean Conservation Area (ACLA-C) of the Nacional Conservation Area System (SINAC) of the Ministry of Environment and Energy (MINAE)	
Size of protected area (ha)	4.876 ha	
Number of staff	Permanent: 5 Temporary:	
Annual budget (US$)	54.780	
Designations (IUCN category, World Heritage, Ramsar etc)	RAMSAR	
Reasons for designation	Protect and conserve habitats of species, with special interest in migratory aquatic birds of transcontinental importance	
Brief details of World Bank funded project or projects in PA	Not necessary for GEF-funded projects.	
Brief details of WWF funded project or projects in PA	Not necessary for GEF-funded projects.	
Brief details of other relevant projects in PA	Protection and monitoring of turtles on behalf of the NGO (ANAI). Dolphin study on behalf of Fundación Delfín	
List the two primary protected area objectives		
Objective 1	Protection of wetlands and flooded forests.	
Objective 2	Protection of bird species of transcontinental importance	
List the top two most important threats to the PA (and indicate reasons why these were chosen)		
Threat 1	Tourism in the buffer zone and within the refuge	
Threat 2	Pollution from solid and liquid wastes	
List top two critical management activities		
Activity 1	Control of construction development	
Activity 2	Pollution control	

Name/s of reviewer (including people consulted):

José Masis (Administrator), Earl Junier Libdo, Olman Morales and Ceidi Meléndez (La Amistad-Caribbean Conservation Area (ACLA-C) of the Nacional Conservation Area System (SINAC) of the Ministry of Environment and Energy (MINAE)

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Date assessment carried out (Day/Month/Year):

Earl Junier: 7 March 2006

Olman Morales: 9 March 2006

Ceidi Meléndez: 6 March 2006

Issue	Criteria	Score	Comments	Next steps
1. Legal status Does the protected area have legal status? *Context*	The protected area is not gazetted	0	*Note:* see fourth option for private reserves	
	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 by a trust or similar)	**3 (x)**	The Wildlife Refuge is officially established by Executive Decree , Oficial Gazette of the Republic of Costa Rica #206 de 29/10/1985	
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		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them	**2 (x)**	The local population participates in the activities of the protected area through the Advisory Committee, which is subdivided in the Manzanillo Zonal Committee and the Gandoca Zonal Committee. Environmental organizations that do not form part of the Advisory Committee, disagree over the intensity of human use that the Management Plan permits in the Refuge (REGAMA).	Internal zoning is required, development of management criteria and land/sea-use criteria need to be harmonized with nearby San San Pond Sak RAMSAR Site (see next protected area)

Issue	Criteria	Score	Comments	Next steps
	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented	3		
3. Law enforcement	The staff have no effective capacity/resources to enforce protected area legislation and regulations	0	*Possible issue for comment:* What happens if people are arrested?	
Can staff enforce protected area rules well enough?	There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)	1		
Context	The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain	**2 (x)**	Rangers can detain people who undertake unlawful activities in the protected area. Procedural guarantees exit for the detention. A person can be detained for only 24 hours, so the rapid action of the prosecutor is important.	Provide operational resources to facilitate enforcement.
	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		
	The protected area has agreed objectives, but these are only partially implemented	**2 (x)**	The lack of technical and human means impede fully reaching the stated objectives.	Development of action plans, technical capacity building of staff
	The protected area has agreed objectives and is managed to meet these objectives	3		
5. Protected area design Does the protected area need enlarging,	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible	0	*Possible issue to comment:* does protected Area contain different management zones and are these well maintained?	
	Inadequacies in design mean that achievement of major objectives are constrained to some extent	1		
corridors etc to meet its objectives? *Planning*	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 (x)**	The design of the protected area is adequate for the stated objectives. Also, not only territorial spaces are incorporated, but the body of water and marine zone (although management can be improve din marine zone).	No need to enlarge, although management needs to be improved in marine zone.
6. Protected area boundary	The boundary of the protected area is not known by the management authority or local	0	*Possible issue to comment:* are there tenure disagreements affecting PA?	

Issue	Criteria	Score	Comments	Next steps
demarcation	residents/neighbouring land users			
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/neighbouring land users	1		
	The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated	**2 (x)**	The limits of the Park are known by the environmental and local authorities and the local communities, although they are not physically marked. Any person who wants to buy or sell land solicits certification of proof from MINAE that the limits of the protected area are not affected.	Internal zoning needs to be improved. Awareness raising required Enhanced collaboration with San San Pond Sak in Panama Marine boundary demarcated and socialized.
	The boundary of the protected area is known by the management authority and local residents and is appropriately demarcated	3		

Issue	Criteria	Score	Comments	Next steps
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 (x)**	The Management Plan is approved and implemented with local participation through the Advisory Committee, structured in the Zonal Committees of Gandoca and Manzanillo.	Internal zoning (both land and sea) needs to be harmonized with San San Pond Sak, joint monitoring with San San Pond Sak
	An approved management plan exists and is being implemented	3		
Additional points *Planning*	The planning process allows adequate opportunity for key stakeholders to influence the management plan	**+1 (x)**	The Management is elaborated and will be reviewed at its time with the participation of key social agents.	
	There is an established schedule and process for periodic review and updating of the management plan	**+1 (x)**	A periodic process of review of the Management Plan exists.	
	The results of monitoring, research and evaluation are routinely incorporated into planning	**+1 (x)**	The results of routine monitoring and evaluation serves as lessons learned to incorporate them into the Management Plan in its later revisions.	Strengthen monitoring activities and collaborate with San San Pond Sak on binational monitoring efforts.
8. Regular work plan Is there an annual work plan?	No regular work plan exists	0		
	A regular work plan exists but activities are not monitored against the plan's targets	1		
	A regular work plan exists and actions are monitored against the plan's targets, but many activities are not completed	**2 (x)**	A regular work plan (Annual Operative Plan) exists and the actions are monitored with respect to the work goals, but some activities are not complete, due to the lack of economic resources to deal with them.	Support the development of action plans, in collaboration with San San Pond Sak

Issue	Criteria	Score	Comments	Next steps
Planning/Outputs	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?	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 making	**1 (x)**	Limited investigation, monitoring and study of critical habitat, species and cultural values exists, but is not enough for planning and decision making regarding the protected area. Up to now, the information available is partial and scientific studies have been centered on very specific elements (turtles, bioprospecting of marine moluscs- INBio ANAI association collaborates in the process of monitoring of marine turtles, contributing valuable data for the management of reptiles. The ANAI association has begun a project of monitoring fish, which contributes valuable data for the management of fish populations. Studies are being made of dolphins by the Dolphin Foundation, which will contribute valuable data for their management)	Binational monitoring should take place More data required on water and soil quality Data on management effectiveness need to be improved. Development integrated information system Disseminate information

Issue	Criteria	Score	Comments	Next steps
Context	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**		
	There is some ad hoc survey and research work	**1 (x)**	A Research Plan developed by the environmental authorities does not exist. Through NGOs very focalized research is carried out on elements of conservation, but lacking research in more elements of conservation, above all in ecosystems.	Targeted research grants program to promote research on topics that will facilitate adaptive management.
	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	Requirements for active management of critical ecosystems, species and cultural values have not been assessed	0		

Issue	Criteria	Score	Comments	Next steps
Is the protected area adequately managed (e.g. for fire, invasive species, poaching)?	Requirements for active management of critical ecosystems, species and cultural values are known but are not being addressed	1		
	Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed	**2 (x)**	The environmental authority knows the need for active management, but a only a part of the plan has been implemented due to lack of technical and human resources.	Binational collaboration should be enhanced and technical training of staff and additional operational resources required.
Process	Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed	3		

Issue	Criteria	Score	Comments	Next steps
12. Staff numbers Are there enough people employed to manage the protected area? *Inputs*	There are no staff	0		
	Staff numbers are inadequate for critical management activities	**1 (x)**	The availablity of personnel to address the management of critical and non-critical activities is scarce. Only 5 people are designated for this.	Technical and operational capacities will be strengthened.
	Staff numbers are below optimum level for critical management activities	2		
	Staff numbers are adequate for the management needs of the site	3		
13. Personnel management Are the staff managed well enough? *Process*	Problems with personnel management constrain the achievement of major management objectives	0		
	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 (x)**	Personnel management could be improved.	Managament capacities will be strengthened.
	Personnel management is excellent and aids the achievement major management objectives	3		
14. Staff training Is there enough training for staff?	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 (x)**	More training so that personnel are better trained, above all for surveillance.	Technical and operational capacities will be strengthened.

Issue	Criteria	Score	Comments	Next steps
Inputs/Process	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 (x)**	The budget assigned to the protected area is inadequate and scarce to attend to he management needs. Money is available only for operation, which constitutes an important limitation.	Innovative financial mechanisms will be designed and implemented for supporting protected area management.
	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	There is no secure budget for the protected area and management is wholly reliant on outside or year by year funding	0		
Is the budget secure?	There is very little secure budget and the protected area could not function adequately without outside funding	**1 (x)**	The budget is unsecure. Resources are requested from central MINAE, in function of operational costs that need to be incurred, which makes the action and planning of the protected area authority difficult.	The project will promote enhanced Government commitment for allocated resources for the management of the protected area and sustainable financing alternatives will be developed.
Inputs	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		

Issue	Criteria	Score	Comments	Next steps
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 (x)**	The budget assigned to the protected area is very poor, which makes difficult the effectiveness of management of the area. The budget is used for operational costs.	Development of more targeted action plans and improve planning capacities of staff.
	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?	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 (x)**	Equipment and facilities are scarce, which makes management difficult (some signs in Manzanillo, picnic areas in Manzanillo and administrative buildings and shelters for rangers, police and volunteers in Manzanillo y Gandoca).	Operational capacities need to be strengthened, including visitation infrastructure.
	There are adequate equipment and facilities	3		

Issue	Criteria	Score	Comments	Next steps
19. Maintenance of equipment	There is little or no maintenance of equipment and facilities	0		
Is equipment adequately maintained?	There is some ad *hoc* maintenance of equipment and facilities	1		
Process	There is maintenance of equipment and facilities, but there are some important gaps in maintenance	**2 (x)**	Equipment of the protected area is maintained, but some of them take time until they are repaired or renewed (signage)	Develop and put in place a more rigorous maintenance plan, with clear responsibilities and timetables.
	Equipment and facilities are well maintained	3		
20. Education and awareness programme	There is no education and awareness programme	**0 (x)**	There is no formalized education program undertaken by the environmental authority of the protected area because of lack of budget. The environmental organizations CBTC and ANAI undertake some actions of environmental education (schools in Gandoca, Mata Limón and Manzanillo), but it is not a program continued in time.	The project will support a locally adapted environmental awareness raising program, as well as an interactive program for children and youth developed in association with primary and secondary schools, as well as civil society
Is there a planned education programme?	There is a limited and ad *hoc* education and awareness programme, but no overall planning for this	1		
Process	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	There is no contact between managers and neighbouring official or corporate land users	0		

Issue	Criteria	Score	Comments	Next steps
neighbours Is there co-operation with adjacent land users? *Process*	There is limited contact between managers and neighboring official or corporate land users	**1 (x)**	The contact between the environmental authority that manages the protected area and the owners of the land around the refuge is sporadic but it exists.	Involve as many stakeholders as possible during the Project lifetime (and beyond) Increase contacts between environmental authorities and land-owners for collaborative management.
	There is regular contact between managers and neighboring official or corporate land users, but only limited co-operation	2		
	There is regular contact between managers and neighboring official or corporate land users, and substantial co-operation on management	3		
22. Indigenous people	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area	**0 (x)**	Only a small sector of the protected area borders with the Bri Bri indigenous territory of Keköldi. The indigenous authority is not consulted, though it participates in the forestry committee.	Enhance collaboration with nearby indigenous communities.

Issue	Criteria	Store	Comments	Next steps
Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions?	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in the resulting decisions	**1 (x)**	Only a small sector of the protected area borders with the Bri Bri indigenous territory of Keköldi. The indigenous authority is not consulted, though it participates in the forestry committee.	Enhance collaboration with nearby indigenous communities.
	Indigenous and traditional peoples directly contribute to some decisions relating to management	2		
Process	Indigenous and traditional peoples directly participate in making decisions relating to management	3		
23. Local communities	Local communities have no input into decisions relating to the management of the protected area	0		
Do local communities resident or near the protected area have input	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		

Issue	Criteria	Store	Comments	Next steps
	Local communities directly participate in making decisions relating to management	**3 (x)**	Private and public lands exist in the wildlife refuge, which has led to the existence of an organizational structure in which the local population participates in the management of the protected area. The structure is made up of the national governmental environmental authority, MINAE, the Municipality of Talamanca and the Development Associations of Gandoca and Manzanillo and by three NGOs present in the zone, ANAI, APROGAN and ADECOMAGA. These organizations conform the Advisory Committee, which is subdivided into the Manzanillo Zonal Committee and the Gandoca Zonal The function of the Zonal Committees is to apply and oversee the compliance of the Refuge Management Plan, issuing or denying the resource use permits among other things..	Continue strengthening liaisons between local communities and environmental authorities in decisions related to management.
Additional points	There is open communication and trust between local stakeholders and protected area managers	**+1(x)**	There is constant communication between the environmental authority of the protected area and the local population.	Special attention to improve communication with indigenous communities and local inhabitants will be considered.
Outputs	Programs to enhance local community welfare, while conserving protected area resources, are being implemented	+1		
24. Visitor facilities	There are no visitor facilities and services	0	*Possible issue for comment:* Do visitors	

Issue	Criteria	Store	Comments	Next steps
			damage the protected area?	
Are visitor facilities (for tourists, pilgrims etc) good enough?	Visitor facilities and services are Inappropriate for current levels of visitation or are under construction	1		
	Visitor facilities and services are adequate for current levels of visitation but could be improved	**2 (x)**	The facilities that visitors of the protected area find are limited to posters and brochures and meteorological information on the MINAE web page, making it necessary to improve the facilities. The impacts that tourists tend to cause are limited to movement on the existing paths, some fire pits and some garbage disposal areas.	Promotion of tourism development creating production chains between the coastal area and the middle and upper sub-basins will improve the enabling conditions for tourism (including facilities).
Outputs	Visitor facilities and services are excellent for current levels of visitation	3		
25. Commercial tourism	There is little or no contact between managers and tourism operators using the protected area	0	Possible issue for comment: examples of contributions	

Issue	Criteria	Score	Comments	Next steps
Do commercial tour operators contribute to protected area management? *Process*	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 area values	2		
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts	**3 (x)**	Good cooperation exists between the environmental authority of the protected area and the foreign and local tourist agents	Continue collaboration between authorities and tourism operators.
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 (x)**	A tariff is not charged for entering the protected area	Development of a financial plan, including an analysis of the possibility to charge an entrance fee and pilot.
	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*	Important biodiversity, ecological and cultural values are being severely degraded		*Possible issue for comment:* It is important to provide details of the biodiversity, ecological or cultural values being affected	
	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 significantly impacted	**2 (x)**	Important biodiversity, ecological and cultural values exist that are not degraded, although discrepancies exist in the intensity of human use that the Management Plan permits and the opinion of local environmental organizations.	The integrated monitoring and evaluation system to be developed by the Project will contribute to shed light on this issue.
	Biodiversity, ecological and cultural values are			

Issue	Criteria	Score	Comments	Next steps
	predominantly intact	3		
Additional points *Outputs*	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone	+1		
28. Access assessment	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated objectives	0		

Issue	Criteria	Score	Comments	Next st
Is access/resource use sufficiently controlled? *Outcomes*	Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives	1		
	Protection systems are moderately effective in controlling access or use of the reserve in accordance with designated objectives	**2 (x)**	The systems of protection can be improved to make the control of access and use more effective, increasing the technical and human means are now scarce.	Operational strengthening for enhanced access control.
	Protection systems are largely or wholly effective in controlling access or use of the reserve in accordance with designated objectives	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	*Possible issue for comment:* how does national or regional development impact on the protected area?	
	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 to the regional economy	2		
	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area (e.g. employment of locals, locally operated commercial tours etc)	**3 (x)**	The local population benefits in an important way from the existence of the protected area, since the management of tourists are in the hands of tour operators from the vicinity of Puerto Viejo; the four local communities control the lodging, (Gandoca y Manzanillo) and transport; the guides are of the local population, the dolphin watching boats are of the local population, etc. Each year, 300 volunteer-tourists come to Gandoca to manage the turtles, leaving some $57.000.	New alternative livelihoods based on the sustainable use of biodiversity should be developed (incl. eco-tourism)
30. Monitoring and evaluation	There is no monitoring and evaluation in the protected area	0		

Are management activities monitored against performance?	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		
Planning/Process	A good monitoring and evaluation system exists, is well implemented and used in adaptive management	**3 (x)**	A system of monitoring and evaluating the performance of the Administration of the protected areas of Costa Rica exists. The local population participates in this system, contributing their vision through the Advisory Committee. The results of the monitoring and evaluation system are used in the management of the protected area.	Monitoring systems for biodiversity, water and land will be improved.
TOTAL SCORE		**56**		

Reporting Progress in Protected areas: Data Sheet

Name of protected area	Humedal de Importancia Internacional San San Poond Sack (HIISSPS)		
Location of protected area (country, ecoregion, and if possible map reference)	Panamá. Provincia de Bocas del Toro. Distrito de Changuinola		
Date of establishment (distinguish between agreed and gazetted*)	Agreed Resolution of the Board of Directors 020-94 del August 2, 1994 of the National Authority of the Environment (ANAM),	Gazetted Gaceta Oficial #22617 del 7 de septiembre de 1994	
Ownership details (i.e. owner, tenure rights etc)	Private and state properties exist		
Management Authority	National Authority of the Environment of Panama (ANAM)		
Size of protected area (ha)	20.025 ha		
Number of staff	Permanent: 3	Temporary: 12 volunteers of the Association of Friends of the COSAT and Nature (AAMVECONA)	
Annual budget (US$)	9.500		
Designations (IUCN category, World Heritage, Ramsar etc)	RAMSAR wetland, Biosphere Reserve and World Heritage site		
Reasons for designation	Protect and conserve habitats of many wild species with special interest in aquatic migratory birds of transcontinental importance.		
Brief details of World Bank funded project or projects in PA	Not necessary for GEF-funded projects.		
Brief details of WWF funded project or projects in PA	Not necessary for GEF-funded projects.		
Brief details of other relevant projects in PA	The AAMVECONA association with support of the environmental association Conservation International has implemented a program of monitoring of manatee and of water quality, the latter in collaboration with National University of Panama (Regional de Changhuinola). The investment of Conservation International is $250.000.		
List the two primary protected area objectives			
Objective 1	Protection of a rich variety of wetlands.		
Objective 2	Conservation of the Beach of Changuinola, as a site of importance for marine turtles, as well as the manatee.		
List the top two most important threats to the PA (and indicate reasons why these were chosen)			
Threat 1	Contamination of water by agrochemicals and waste. This menace has been chosen because of the fragility of the water resource to contamination by agrochemicals.		

Threat 2	Extraction of wood, hunting and poaching of turtle egs, This second menace affect key elements of conservation of wetlands.
List top two critical management activities	
Activity 1	Reduce water pollution
Activity 2	Develop income generating activities for the local communities in and around the wetland and increase resources provided by the National Environmental Authority (ANAM)

Name/s of assessor (including people consulted): Hernández Bonilla. Coordinador Regional de Áreas Protegidas de la Autoridead Nacional del Ambiente de Panamá (ANAM)

Contact details (email etc.): Teléfono: 00 507 758 66 03. hbonilla63@latinmail.com

Date assessment carried out (Day/Month/Year): 6, 8 y 10 de marzo de 2006

***** Or formally established in the case of private protected areas

Issue	Criteria	Score	Comments	Next steps
1. Legal status Does the protected area have legal status? *Context*	The protected area is not gazetted	0	*Note:* see fourth option for private reserves	
	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 by a trust or similar)	**3 (x)**	The protected area has a creation agreement published in the official Gazette of the Republic of Panama # 22617 on 07/09/1994	
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		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them	**2 (x)**	Control mechanisms exist, but the difficulties of movement (swamps) and the lack of human, technical and material means create a situation in which these means cannot be implemented in an efficient form.	Internal zoning is required development of management criteria and a land and sea-use need to be harmonized with nearby Gandoca-Manzanillo National Wildife Refuge (see previous protected area)
	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented	3		
3. Law enforcement	The staff have no effective capacity/resources to enforce protected area legislation and regulations	0	*Possible issue for comment:* What happens if people are arrested?	

Issue	Criteria	Score	Comments	Next steps
Can staff enforce protected area rules well enough? *Context*	There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)	**1 (x)**	The scarcity of human and technical resources to apply the regulatory norms of the Protected Area is an important restriction that must be overcome. The rangers can detain people in the protected area for unlawfull activities. Procedural guarantees exist for the detention.	Provide operational resources to facilitate enforcement
	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		
	The protected area has agreed objectives, but these are only partially implemented	**2 (x)**	The objectives of preservation of the wetland is complied with in part, but the lack of economic resources impedes the full accomplishment of the objectives. Agencies and non-governmental organizations are being worked with to leverage resources and facilitate compliance with the conservation objectives	Develop action plans, technical capacity building of staff
	The protected area has agreed objectives and is managed to meet these objectives	3		
5. Protected area design	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible	0	*Possible issue for comment:* does the protected area contain different management zones and are these well maintained?	

Issue	Criteria	Score	Comments	Next steps
Does the protected area need enlarging,	Inadequacies in design mean that achievement of major objectives are constrained to some extent	**1 (x)**	The design of the limits of the wetland is not altogether adequate, since it should include areas outside the protected area, to facilitate the movement of the manatee. Nor is there a good design in relation to the marine zone, since the wetland does not formally include marine areas.	The possibility of broadening the protection environment of the wetland to the San San River is being studied, with the object of contecting the Wild Protected Area with the La Amistad International Park. In this manner it is possible to protect the area for the movement of manatee. Expansion to the marine zone is also needed.
corridors etc to meet its objectives? *Planning*	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 Is the boundary known and demarcated?	The boundary of the protected area is not known by the management authority or local residents/neighbouring land users	0	*Possible issue for comment:* are there tenure disagreements affecting the protected area?	
	The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users	1		

Issue	Criteria	Score	Comments	Next steps
Context	The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated	**2 (x)**	The limits of the wetland are known by the environmental, and local authorities and by the residents . To date it is not demarcated, although the geographic coordinates of the protected area are relatively known. The property owners who live in its environs request the National Environmental Authority of Panama (ANAM) to certify that their properties are not within the protected area, when it is necessary for the transactions of properties.	The PRONAT project is supposed to demarcate the protected area, but to date this has not been made a reality. Internal zoning needs to be improved Awareness raising required Enhanced collaboration with Gandoca-Manzanillo in Costa Rica
	The boundary of the protected area is known by the management authority and local residents and is appropriately demarcated	3		

Issue	Criteria	Score	Comments	Next steps
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 (x)**	The Management Plan is not being implemented in its totality. The support of the interested environmental agencies is sought to help implement the Management Plan	Internal zoning needs to be harmonized with Gandoca-Mazanillo, joint monitoring with Gandoca Manzanillo
	An approved management plan exists and is being implemented	3		
Additional points *Planning*	The planning process allows adequate opportunity for key stakeholders to influence the management plan	**+1 (x)**	The Management Plan was elaborated and approved a short time ago. It will be revised at the appropriate time with the participation of the key social agents.	
	There is an established schedule and process for periodic review and updating of the management plan	+1		
	The results of monitoring, research and evaluation are routinely incorporated into planning	+1		
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		
	A regular work plan exists and actions are monitored against the plan's targets, but Many activities are not completed	**2 (x)**	A regular work plan exists and the actions are monitored with respect to the work goals, but many activities are not completed due to the lack of economic resources.	Support to the development of action plans, in collaboration with Gandoca-Manzanillo
	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	There is little or no information available on the critical habitats, species and cultural values of the protected area	0		

Issue	Criteria	Score	Comments	Next steps
Do you have enough information to manage the area?	Information on the critical habitats, species and cultural values of the protected area is not sufficient to support planning and decision making	1	Limited research, monitoring and studies of critical habitats, species and cultural values to facilitate planning and decision making in the protected area takes place. Up to this time, the available information ;however, is partial and the scientific studies have been centered in very specific aspects (monitoring of turtles and manatee). With the financing of donors the monitoring of manatee is continued (Conservation International and Natura Foundation).	Binational monitoring processes will take place More data required on water and soil quality Data on management effectiveness could be improved Development integrated information Disseminate information

Issue	Criteria	Score	Comments	Next steps
Context	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? *Inputs*	There is no survey or research work taking Place in the protected area	0	A work plan exists with relation to the monitoring and investigation of marine turtles and manatees. Investigation and monitoring of more elements of conservation (for example birds) is lacking.	Targeted research grants program to promote research on topics that will facilitate adaptive management
	There is some ad hoc survey and research Work	**1 (x)**		
	There is considerable survey and research work but it is not directed towards the needs of protected area management	2		
	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)?	Requirements for active management of critical ecosystems, species and cultural values have not been assessed	0	The needs of management are known, but are only partially accomplished, mainly due to lack of personnel and budget	Binational collaboration should be enhanced and technical training of staff and additional operational resources required
	Requirements for active management of critical ecosystems, species and cultural values are known but are not being addressed	1		
	Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed	**2 (x)**		

Issue	Criteria	Score	Comments	Next steps
Process	Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed	3		

Issue	Criteria	Score	Comments	Next steps
12. Staff numbers Are there enough people employed to manage the protected area? *Inputs*	There are no staff	0		
	Staff numbers are inadequate for critical management activities	1		
	Staff numbers are below optimum level for critical management activities	**2 (x)**	There are only three people assigned to the protected area, supported by some 12 volunteers from AAMVECONA More people are needed to improve the conservation objectives. It is estimated that the optimum would be 10-12 people (environmental education, protected area coordinator, a person in charge of research and rangers)	Technical and operational capacities will be strengthened
	Staff numbers are adequate for the management needs of the site	3		
13. Personnel management Are the staff managed well enough? *Process*	Problems with personnel management constrain the achievement of major management objectives	0		
	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 (x)**	The wetland management personnel are trained, although they could improve their efficiency.	Technical and operational capacities will be strengthened
	Personnel management is excellent and aids the achievement major management objectives	3		
14. Staff training Is there enough training for staff?	Staff are untrained	0		
	Staff training and skills are low relative to the needs of the protected area	1		

Issue	Criteria	Score	Comments	Next steps
	Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management	**2 (x)**	The personnel who manage the wetland are trained, although training courses are still necessary to improve their formation and comply with the management objectives.	Technical and operational capacities will be strengthened
Inputs/Process	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?	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 (x)**	Budget exists (US$9.500 in 2006), but it is very insufficient to attend to the conservation needs of the Wetland Funds are required to finance needs. Natura Foundation is going to support the monitoring of manatee beginning in 2006. TNC is going to support with the purchase of land for the construction of a visitors reception and interpretation center.	Innovate financial mechanisms will be designed and implemented for supporting protected area management
	The available budget is acceptable, but could be further improved to fully achieve effective management	2		

Issue	Criteria	Score	Comments	Next steps
Inputs	The available budget is sufficient and meets the full management needs of the protected area	3		
16. Security of budget Is the budget secure? *Inputs*	There is no secure budget for the protected area and management is wholly reliant on outside or year by year funding	0	Security exists in terms of the budget that FIDECO trust provides (a national fund for protected areas), although it has a very scarce budget.	The Project will promote enhanced Govemment commitment for allocated resources for the management of the protected area and sustainable financing alternatives will to developed
	There is very little secure budget and the protected area could not function adequately without outside funding	**1 (x)**		
	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 (x)**	The budget is extremely poor for the important needs of wetland protection activities.	Develop more targeted action plans and improve planning capacities of staff
	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		

Issue	Criteria	Score	Comments	Next steps
18. Equipment	There are little or no equipment and facilities	**0 (x)**	The equipment and facilities are very poor. Terrestrial and marine equipping need to be improved. A refuge with rooms exists, but it is not adequate for the use of management and tourist personnel. TNC is going to support in the purchase of land for the construction of a visitor and interpretation center for the wetland, as well as a small pier with canoes for management and tourist personnel.	Operational capacities need to be strengthened, including visitation infrastructure
Are there adequate equipment and facilities? *Process*	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		
	There are adequate equipment and facilities	3		

Issue	Criteria	Score	Comments	Next steps
19. Maintenance of equipment Is equipment adequately maintained? *Process*	There is little or no maintenance of equipment and facilities	**0 (x)**	The maintenance of equipment is very poor, because of a scarce existing budget.	Develop and put in place a more rigorous maintenance plan, with clear responsibilities and timetables
	There is some ad *hoc* maintenance of equipment and facilities	1		
	There is maintenance of equipment and facilities, but there are some important gaps in maintenance	2		
	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 (x)**	A formalized plan of education does not exist because of lack of personnel. With the scarce resources available some activities are supported by the FIDECO (national) trust.	The project will support a locally adapted environmental awareness raising program, as well as an interactive program for children and youth developed in association with primary and secondary schools, as well as civil society
	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 Is there co-operation with adjacent land users?	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 (x)**	Some contact and collaboration with users from land bordering the wetland (community groups, small producers, banana growers (Bocas Fruit Company), although these contacts could be increased.	Involve as many stakeholders as possible during the Project lifetime (and beyond) pretends to increase contacts between environmental authorities and land owners

Issue	Criteria	Score	Comments	Next steps
Process	There is regular contact between managers and neighbouring official or corporate land users, and substantial co-operation on management	3		
22. Indigenous people	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area	**0 (x)**	Indigenous communities do not exist in the interior or environs of the San San Pond Sack wetland. In the environs of the San San there exist families of Ngöbe-Bugle indigenous groups who live outside the territory.	Improve collaboration with nearby indigenous groups.

Issue	Criteria	Score	Comments	Next steps
Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions? *Process*	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in the resulting decisions	1		
	Indigenous and traditional peoples directly contribute to some decisions relating to management	2		
	Indigenous and traditional peoples directly participate in making decisions relating to management	3		
23. Local communities Do local communities resident or near the protected area have input to management decisions? *Process*	Local communities have no input into decisions relating to the management of the protected area	0	The local communities formulate suggestions and are consulted for decision making.	The Project aims to continue strengthening liaisons between local communities and environmental authorities in decisions related to management
	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 (x)**		
	Local communities directly participate in making decisions relating to management	3		
Additional points	There is open communication and trust between local stakeholders and protected area managers	**+1 (x)**	Good communication exists between the authority which manages the wetland and social and productive agents in the environs.	Continue this communication, with special attention to improve communication with communities

Issue	Criteria	Score	Comments	Next steps
Outputs	Programmes to enhance local community welfare, while conserving protected area resources, are being implemented	+1		
24. Visitor facilities Are visitor facilities (for tourists, pilgrims etc) good enough? *Outputs*	There are no visitor facilities and services	0	*Possible issue for comment:* Do visitors damage the protected area? There are no facilities or services for attention to tourists. Tourists create no environmental damage.	Promotion of tourism development creating production chains between the coastal area ad the middle and upper sub-basins will improve the enabling conditions for tourism (including facilities)
	Visitor facilities and services are Inappropriate for current levels of visitation or are under construction	1		
	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		
25. Commercial tourism	There is little or no contact between managers and tourism operators using the protected area	**0 (x)**	Possible issue for comment: examples of contributions Tourists who come to San San go on their own. No tour operates for the time being.	Project's activities will promote the collaboration between authorities and tourism operators

Issue	Criteria	Score	Comments	Next steps
Do commercial tour operators contribute to protected area management? *Process*	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 area values	2		
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts	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	A visitors fee of 3 Balboas is charged to foreigners and 1 Balboa to nationals. The money does not stay with the Wetland Administration, goes into a central cashier of the government, without any part going to wetland environmental authority.	The project will support the development of a financial plan to assure more resources.
	The fee is collected, but it goes straight to central government and is not returned to the protected area or its environs	**1 (x)**		
	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?	Important biodiversity, ecological and cultural values are being severely degraded		*Possible issue for comment:* It is important to provide details of the biodiversity, ecological or cultural	
	Some biodiversity, ecological and cultural	1		

Issue	Criteria	Score	Comments	Next steps
	values are being severely degraded		values being affected	
	Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted	**2 (x)**	The water resources are mostly affected by the drainage of water from banana plantations and flow of residual urban water. There is also certain damage to mangroves.	The integrated monitoring and evaluation system to be developed by the Project will contribute improve the information base required for decision making.
Outcomes	Biodiversity, ecological and cultural values are predominantly intact	3		
Additional points *Outputs*	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone	**+1 (x)**	There are no programmes for the restoration of degraded ecosystems	Support ecosystem restoration.
28. Access assessment	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated objectives	**0 (x)**	The system of control of human access to the wetland is currently very deficient, although the physical characteristics of the broad swampy zones contribute to its protection, since it makes human access difficult.	Operational strengthening for enhanced access control.

Issue	Criteria	Score	Comments	Next steps
Is access/resource use sufficiently controlled? *Outcomes*	Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives	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 objectives	3		
29. Economic benefit assessment Is the protected area providing	The existence of the protected area has reduced the options for economic development of the local communities	0	*Possible issue for comment:* how does national or regional development impact on the protected area?	
	The existence of the protected area has neither damaged nor benefited the local economy	1		
economic benefits to local communities?	There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance to the regional economy	**2 (x)**	The main part of the community of the environs of San San work in the banana plantations. Some organizations of inhabitants in the environs and interior of San San benefit from the wetland, obtaining donations that enable them to collaborate in conservation efforts. Today, due to the fact that San San is not very publicized and no equipment exists to receive tourists no economic activity is being generated that benefits the population.	Development of a tourism promotion and development plan.
Outcomes	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area (e.g. employment of locals, locally operated commercial tours etc)	3		
30. Monitoring and evaluation	There is no monitoring and evaluation in the protected area	0		
Are management activities monitored	There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results	1		

against performance?	There is an agreed and implemented monitoring and evaluation system but results are not systematically used for management	**2 (x)**	A monitoring and evaluation system has existed for actions in the wetland for 5 years, in which communities, NGOs and private companies participate. An annual workshop is made with civil society to analyze the actions taken. The results are incorporated in the management of the protected area.	Monitoring systems for biodiversity, water and land will be improved.
Planning/Process	A good monitoring and evaluation system exists, is well implemented and used in adaptive management	3		
TOTAL SCORE		**40**		

Reporting Progress in Protected areas: Data Sheet

Name of protected area	Parque Internacional La Amistad (PILA)	
Location of protected area (country, ecoregion, and if possible map reference)	Ecoregión Talamanca, Sureste de Costa Rica, provincia de Limón (Área de Conservación Amistad-Caribe)	
Date of establishment (distinguish between agreed and gazetted*)	Agreed: Executive Decree #13324-A 22-02-82 (Creación) Executive Decree # 16848-MAG 20-02-86 (Amplification) Executive Decree #21199-MIRENEM 23-04-92 (Change to Talamanca National Park)	Gazetted Año 1982. Semestre 1. Tomo 1. Pág. 110 Gazette # 36 de 02/02/186 Gazette # 78 de 23/04/1991
Ownership details (i.e. owner, tenure rights etc)	Land of the Costa Rican State	
Management Authority	La Amistad-Caribe (ACLA-C) Conservation Area of the Natioanl System of Conservation Areas (SINAC) of the Ministry of Environment and Energy (MINAE) de Costa Rica	
Size of protected area (ha)	174.881 ha	
Number of staff	Permanent: 0 Temporary: 0 c	
Annual budget (US$)	There is no budget to specifically attent to the PILA from the ACLA-C	
Designations (IUCN category, World Heritage, Ramsar etc)	Biosphere Reserve and World Heritage Site	
Reasons for designation	The great biodivesty of international importance that it possesses.	
Brief details of World Bank funded project or projects in PA	Not necessary for GEF-funded projects.	
Brief details of WWF funded project or projects in PA	Not necessary for GEF-funded projects.	
Brief details of other relevant projects in PA	The environmental NGOs support certain aspects of the conservation of the PILA. TNC supports the Costa Rica-Panama Binational Commission on PILA, design of the monitoring of the elements of conservation, etc. This NGO invests in the totality of the Amistad Biosphere Reserve some US$200,000. Conservation International has supported monitoring of the danta.	

List the two primary protected area objectives	
Objective 1	Conservation of biodiversity (vegetal, floral y fauna)
Objective 2	Protection of the water resource
List the top two most important threats to the PA (and indicate reasons why these were chosen)	
Threat 1	Agricultural activities in the búfer zones in the Pacific side of the Park.
Threat 2	In the Yorkin sub-basin, migratory movements and settlements
List top two critical management activities	
Activity 1	Control of illegal activities (extraction of fauna and flora)
Activity 2	Monitoring of biodiversity

Name/s of assessor (including people consulted):

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Date assessment carried out (Day/Month/Year):

Earl Junier Libdo**:** 7 y 10 de marzo de 2006

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Or formally established in the case of private protected areas

Issue	Criteria	Score	Comments	Next steps
1. Legal status Does the protected area have legal status? *Context*	The protected area is not gazetted	0	*Note:* see fourth option for private reserves	
	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 by a trust or similar)	**3 (x)**	The protected area has creation and amplification decrees that have been published in the Oficial Gazette of the Republic of Costa Rica. The Executive Decrees of creation, amplification and creation of Talamanca National Park appears in the following: Gazettes of the Republic of Costa Rica. Creation of the PILA: Year 1982. Quarter 1. Tomo 1. Pág. 110 Amplification: Gazette # 36 de 02/02/1986 Creation of Talamanca National Park Gazette # 78 of 23/04/1992	
2. Protected area Regulations Are inappropriate land uses and activities (e.g. poaching)	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 (x)**	Mechanisms of control exist, but the broken terrain, the lack of access and equipment in the Park, as well as the scarcity of material and human means make for a situation in which the implementation is not effective.	Internal zoning is required development of management criteria and land-use criteria need to be harmonized with nearby PILA in Panama

Issue	Criteria	Score	Comments	Next steps
controlled? *Context*	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	*Possible issue for comment:* What happens if people are arrested?	
	There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)	**1 (x)**	The fundamental problem of the PILA is the scarcity of human and technical resources to apply the regulatory norms of the protected area The park rangers can detain people who carry out unlawful activities in the protected area. Procedural guarantees exist for the detentions. A person can be detained for only 24 hours, so the rapid action of the prosecutor is important.	Provide operational resources to facilitate enforcement
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		
	The protected area has agreed objectives, but these are only partially implemented	**2 (x)**	The objective of preservation of water resources, through the conservation of the forests is complied with. Nonetheless, the objective of biodiversity conservation is only partially completed, since problems of illegal and extraction of species and flora and fauna exist, mainly due to lack of human and technical resources.	A project is under way to increase the number of indigenous guards through transfer of personnel from IDA and MINAE to the Bri Bri of Talamanca Integral Development (ADITIBRI), to exercise the tasks of surveillance of the PILA (shared responsibility).
	The protected area has agreed objectives and is managed to meet these objectives	3		
5. Protected area Design Does the protected area corridors etc to meet its objectives?	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible	0	*Possible issue for comment:* does the protected area contain different management zones and are these well maintained?	
	Inadequacies in design mean that achievement of major objectives are	1		
	Design is not significantly constraining achievement of major objectives, but could be improved	**2 (x)**	The design of the park is adequate for the stated objectives, since they encompass the forests that produce water and enable the movement of fauna. Nonetheless, a problem of overlap exists between the PILA and Bri Bri of Talamanca (La Isla sector) and Cabecar of Telire territories. These overlaps need attention from the environmental authority of Costa Rica (MINAE) and indigenous organizations. No internal zoning exists, although this is conceived of in the Management Plan.	Development of an action plan to make effective the internal zoning of the PILA and orchestrate the existing overlaps.

Issue	Criteria	Score	Comments	Next steps
Planning	Reserve design features are particularly aiding achievement of major objectives of the protected area	3		
6. Protected area boundary demarcation Is the boundary known and demarcated?	The boundary of the protected area is not known by the management authority or local residents/neighbouring land users	0	*Possible issue for comment:* are there tenure disagreements affecting the protected area?	
	The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users	**1 (x)**	The borders of the Park have not been demarcated. The boundaries are relatively known by the environmental authority of the management of the Park and known with difficulty on part of the local and indigenous communities. Problems of overlap exist between the Park and the Bri Bri dof Talamanca and Cabécar of Telire indigenous territories. Two problems exist in relation to land tenure. 1.In the extreme northeast of the PILA there are 2 small farms that have been established in the Park. A process of action against them has not begun. 2. A problem of overlap exists between the PILA and Bri Bri of Talamanca (sector de La Isla) and Cabécar de Telire territories. These overlaps need negotiation processes between the environmental authority of Costa Rica (MINAE) and the indigenous organizations that still have not been initiated.	Internal zoning needs to be improved Awareness raising required Enhanced collaboration with PILA Panamá

Issue	Criteria	Score	Comments	Next steps
Context	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		

Issue	Criteria	Score	Comments	Next steps
7. Management plan Is there a management plan and is it being implemented? *Planning*	There is no management plan for the protected area	**0 (x)**	At the current time, the Management Plan is being reviewed. The prior Management Plan was never implemented.	Finish reviewing the management plan and start implementation. Internal zoning needs to be harmonized with PILA in Panamá, joint monitoring with PILA in Panamá
	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		
	An approved management plan exists and is being implemented	3		
Additional points *Planning*	The planning process allows adequate opportunity for key stakeholders to influence the management plan	**+1 (x)**	The Management Plan is being reviewed with the participation of key social actors, above all indigenous who have had a broad participation.	
	There is an established schedule and process for periodic review and updating of the management plan	**+1 (x)**	A periodic process of review of the Management Plan exists.	
	The results of monitoring, research and evaluation are routinely incorporated into planning	+1		
8. Regular work plan Is there an annual work plan? *Planning/Outputs*	No regular work plan exists	**0 (x)**	A regular work plan does not exist, but rather sporadic and specific actions.	Support development of action plans, in collaboration with PILA in Panamá
	A regular work plan exists but activities are not monitored against the plan's targets	1		
	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		

Issue	Criteria	Score	Comments	Next steps
9. Resource inventory Do you have enough information to manage the area?	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 making	**1 (x)**	Limited research, monitoring and studies of critical habitats, species and cultural values, is carried out to facilitate planning and decision making for the functioning of the protected area. Up to now, the available information is partial and the scientific studies have been centred in very specific elements. With support of the TNC, a system is being designed to monitor 6 elements of conservation of the PILA. This design is currently in the consensus phase between TNC, the Panamanian and Costa Rican scientific communities and the environmental authorities (MINAE and ANAM)	Binational monitoring should take place More data required on water and soil quality Data on management effectiveness could be improved Development integrated information system Disseminate information

Issue	Criteria	Score	Comments	Next steps
Context	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 (x)**	A Research Plan promoted by the environmental authority does not exist. Very focalized research is done through the NGOs toward certain conservation elements (tapir –Meralvis-), lacking research in critical conservation elements. The Management Plan foresees research and carrying out a workshop with international scientists who have studied certain elements of conservation of the Park. The lack of budget impedes putting the research program into effect.	Targeted research grants program to promote research on tropics that will facilitate adaptive management
	There is some ad hoc survey and research work	1		
	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		

Issue	Criteria	Score	Comments	Next steps
11. Resource management	Requirements for active management of critical ecosystems, species and cultural values have not been assessed	0		
Is the protected area adequately managed (e.g. for fire, invasive species, poaching)?	Requirements for active management of critical ecosystems, species and cultural values are known but are not being addressed	**1 (x)**	Requirements for being able to manage biodiversity are known, but they have not been established due to lack of budget and technical and human means.	Binational collaboration should be enhanced and technical training to staff and additional operational resources required
	Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed	2		
Process	Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed	3		

Issue	Criteria	Score	Comments	Next steps
12. Staff numbers	There are no staff	**0 (x)**	There is no personnel assigned specifically to the National Park. On occasions, personnel of the La Amistad-Caribe Conservation Area(ACLA-C) carry out operations.	Support the mechanisms so that personnel can be assigned to the Park.
Are there enough people employed to manage the protected area?	Staff numbers are inadequate for critical management activities	1		
	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 (x)**	There is no personnel assigned specifically to the National Park.	Support the mechanisms so that personnel can be assigned to the Park.
Are the staff managed well enough?	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		
Process	Personnel management is excellent and aids the achievement major management objectives	3		
14. Staff training	Staff are untrained	**0 (x)**	There is no personnel assigned specifically to the National Park.	Support the mechanisms so that trained personnel can be assigned to the Park.
Is there enough training for staff?	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		
Inputs/Process	Staff training and skills are in tune with the management needs of the protected area, and with anticipated future needs	3		

Issue	Criteria	Score	Comments	Next steps
15. Current budget Is the current budget sufficient?	There is no budget for the protected area	**0**	There is no budget from ACLA-c (SINAC-MINAE) assigned to specifically attend to the PILA TNC supports certain conservation activities.	Innovative financial mechanisms will be designed and implemented for supporting PA management
	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		

Issue	Criteria	Score	Comments	Next steps
Inputs	The available budget is sufficient and meets the full management needs of the protected area	3		
16. Security of budget Is the budget secure? *Inputs*	There is no secure budget for the protected area and management is wholly reliant on outside or year by year funding	**0 (x)**	There is no budget assigned to the La Amistad International Park (PILA).	The project will promote enhanced Govemment commitment for allocated resources for the management of the protected area and sustainable financing alternatives will be developed
	There is very little secure budget and the protected area could not function adequately without outside funding	1		
	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 (x)**	There is no budget assigned to the La Amistad International Park (PILA).	Develop more targeted action plans and improve planning capacities of staff
	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?	There are little or no equipment and facilities	**0 (x)**	No equipment or facilities exist.	Operational capacities need to be strengthened, including visitation infrastructure
	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		

Issue	Criteria	Score	Comments	Next steps
Process	There are adequate equipment and facilities	3		

Issue	Criteria	Score	Comments	Next steps
19. Maintenance of equipment Is equipment adequately maintained? *Process*	There is little or no maintenance of equipment and facilities	**0 (x)**	There is no type of equipment nor other facilities, either for the environmental authority that manages the PILA or for tourists.	The project will support the conditions for the creation of basic equipment and facilities
	There is some ad *hoc* maintenance of equipment and facilities	1		
	There is maintenance of equipment and facilities, but there are some important gaps in maintenance	2		
	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 (x)**	There are no education plans.	The project will support a locally adapted environmental awareness raising program, as well as an interactive program for children and youth developed in association with primary and secondary schools, as well as civil society
	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 Is there co-operation with adjacent land users?	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		

Issue	Criteria	Score	Comments	Next steps
Process	There is regular contact between managers and neighbouring official or corporate land users, and substantial co-operation on management	**3 (x)**	The environmental authority of the PILA (Amistad-Caribe Conservation Area–ACLA-C-) maintains constant contacts with Bri Bri of Talamanca and Cabécar of Talamanca and Telire indigenous communities that border with the park.	Contacts between the environmental authority and indigenous communities for will continue.
22. Indigenous people	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area	0		

Issue	Criteria	Score	Comments	Next steps
Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions?	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in the resulting decisions	**1 (x)**	The indigenous communities that live in the buffer zone of the PILA (Bri Bri of Talamanca and Cabécar of Talamanca and Telire) participate in an intense manner in decisions on the management of the park. In fact, the strategy of the environmental (La Amistad-Caribe Conservation Area – ACLA-C-) is that the indigenous communities share responsibility in the management of the PILA involving them in decision making.	The ACLA-C (MINAE) is strengthening participation of Bri Bri and Cabecar indigenous communities in relation to surveillance of the PILA. An agreement is being materialized between MINAE and the Bri Bri Integral Development Association of Costa Rica, to transfer 5 titles of resource guards to said Indigenous Authority, to make possible the surveillancee of PILA indigenous territories. The PILA (ACLA-C) environmental authority is designing a structure to allow for a more shared management of the Park.
	Indigenous and traditional peoples directly contribute to some decisions relating to management	2		
Process	Indigenous and traditional peoples directly participate in making decisions relating to management	3		
23. Local communities Do local communities resident or near the protected area have input to management decisions? *Process*	Local communities have no input into decisions relating to the management of the protected area	**0 (x)**	Except for the Cabécar of Telire and Cabécar and Bri Bri of Talamanca, territories, there are no lcoal communities established in or near the PILA	
	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		
	Local communities directly participate in making decisions relating to management	3		
Additional points	There is open communication and trust between local stakeholders and protected area managers	**+1 (x)**	There is sufficient confidence and good relations between indigenous leaders and the environmental management authority of the PILA.	

Issue	Criteria	Score	Comments	Next steps
Outputs	Programmes to enhance local community welfare, while conserving protected area resources, are being implemented	+1		
24. Visitor facilities Are visitor facilities (for tourists, pilgrims etc) good enough? *Outputs*	There are no visitor facilities and services	**0 (x)**	*Possible issue for comment:* Do visitors damage the protected area? There is no kind of facility or services so that visitors can come tot he park. In fact there is no flow of visitors to the PILA. Visitors travel around the indigenous territories (some 200 annually), with sporadic visits in the external borders of the PILA.	Create the conditions for establishing minimum services and facilities for attention to visitors.
	Visitor facilities and services are Inappropriate for current levels of visitation or are under construction	1		
	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		
25. Commercial tourism	There is little or no contact between managers and tourism operators using the protected area	**0 (x)**	Possible issue for comment: examples of contributions No tourist arrive to the PILA	Create conditions for establishing mechanisms for attracting tourists to the PILA.

Issue	Criteria	Score	Comments	Next steps
Do commercial tour operators contribute to protected area management? *Process*	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 area values	2		
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts	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 (x)**	A fee for access to the PILA has not been designed.	The development of a financial plan, including an analysis of the possibility to charge an entrance fee and pilot it.
	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?	Important biodiversity, ecological and cultural values are being severely degraded		*Possible issue for comment:* It is important to provide details of the biodiversity, ecological or cultural values being affected	
	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 significantly impacted	2		

Issue	Criteria	Score	Comments	Next steps
Outcomes	Biodiversity, ecological and cultural values are predominantly intact	 **3 (x)**	The biodiversity, the ecology and the cultural values are maintained in sufficiently good conservation state. Due to the difficulty of human access and the existence of extensive indigenous territories in the buffer zone, makes that human impacts marginal in the PILA, but are rather concentrated in the indigenous territories.	Promote binational collaboration
Additional points *Outputs*	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone	+1	Are there restoration programs of degraded areas in the protected area or in the buffer zone?	
28. Access assessment	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated objectives	0		

Issue	Criteria	Score	Comments	Next steps
Is access/resource use sufficiently controlled? *Outcomes*	Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives	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 objectives	**3 (x)**	The large difficulties of access to the PILA and having to go through the indigenous territories in the first place, constitutes an effective system of protection of the park, which facilitates reaching conservation objectives.	Promote binational collaboration
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	*Possible issue for comment:* how does national or regional development impact on the protected area?	
	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 to the regional economy	2		
	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area (e.g. employment of locals, locally operated commercial tours etc)	**3 (x)**	The Bri Bri and Cabecar indigenous communities are benefited by all the environmental goods and services that the park provides to the indigenous territory: good quality water, fauna of gastronomic value, dispersion of plants, etc.	Develop further sustainable alternative livelihoods based on the protected area.
30. Monitoring and evaluation Are management activities monitored against performance? *Planning/Process*	There is no monitoring and evaluation in the protected area	**0 (x)**	A system of monitoring and evaluation of the functioning of the National Park does not exist.	Support of the application of the monitoring system in the PILA.
	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		
	A good monitoring and evaluation system exists, is well implemented and used in adaptive management	3		
TOTAL SCORE		**28**		

Reporting Progress in Protected areas: Data Sheet

Name of protected area	Parque Internacional La Amistad (PILA)	
Location of protected area (country, ecoregion, and if possible map reference)	Panama (Province of Bocas del Toro. District of Changhinola and Province of Chiriquí).	
Date of establishment (distinguish between agreed and gazetted*)	Agreed: Resolution of Board of Director 21-88 of 2/9/88	Gazetted: Oficial Gazette #21129 of September 9, 1998
Ownership details (i.e. owner, tenure rights etc)	Lands of the State, with the presence of human communities in the phase of making their regularizing their situation.	
Management Authority	National Environmental Authority of Panama (ANAM)	
Size of protected area (ha)	207,000 hactares	
Number of staff	Permanent: 2	Temporary: 30 voluntarios
Annual budget (US$)	70.000	
Designations (IUCN category, World Heritage, Ramsar etc)	Biosphere Reserve and World Heritage Site	
Reasons for designation	The great biodiversity of international importance that it possesses.	
Brief details of World Bank funded project or projects in PA	Not necessary for GEF-funded projects.	
Brief details of WWF funded project or projects in PA	Not necessary for GEF-funded projects.	
Brief details of other relevant projects in PA	Teh TNC environmental organization suports disctict protected areaects of the PILA in a sum close to US$200.000 of investment.	
List the two primary protected area objectives		
Objective 1	Conservation of the region with the greatest potential for water in the country.	
Objective 2	Bi-national effort (Panama-Costa Rica) for conservation of high lands of Talamanca-Central mountain range of great biodiversity of international importance.	
List the top two most important threats to the PA (and indicate reasons why these were chosen)		
Threat 1	Extensive cattle ranching, penetration of human groups (indigenous) and future hydroelectric projects	
Threat 2	Extraction of lumber, species of flora (orchids) and fauna of commercial value.	
List top two critical management activities		
Activity 1	Control of illegal activities	
Activity 2	Co-management of the park with the indigenous Naso population.	

Name/s of assessor (including people consulted):

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Date assessment carried out (Day/Month/Year):

6 y 7 de marzo de 2006

Or formally established in the case of private protected areas

Issue	Criteria	Score	Comments	Next steps
1. Legal status Does the protected area have legal status? *Context*	The protected area is not gazetted	0	*Note:* see fourth option for private reserves	
	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 by a trust or similar)	**3 (x)**	The agreement for the creation of the protected area was published in the official Gazette # 21129 of 09/09/1988	
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		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them	**2 (x)**	Mechanisms exist for the control of the inappropriate use of soil and activities. The Problem arose of the difficulty of access of vigilance teams to the PILA. The Naso-Teribe indigenous of the neighboring Palo Seco Protector Forest collaborates in vigilance so that inappropriate uses are not developed.	Internal zoning is required, development of management criteria and land use criteria need to be harmonized with nearby PILA in Costa Rica
	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented	3		
3. Law enforcement	The staff have no effective capacity/resources to enforce protected area legislation and regulations	0	*Possible issue for comment:* What happens if people are arrested?	

Issue	Criteria	Score	Comments	Next steps
Can staff enforce protected area rules well enough? *Context*	There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)	**1 (x)**	The fundamental problem of the PILA is the scarcity of human and technical resources to apply the regulatory norms of the protected area. The park rangers can detain people who carry out unlawful activities in the protected area. Procedural guarantees exist for the detention.	Provide operational resources to facilitate enforcement
	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		
	The protected area has agreed objectives, but these are only partially implemented	**2 (x)**	The lack of adequate budget and personnel make the full compliance of the stated objects of the Management Plan difficult.	Develop action plans, technical capacity building of staff
	The protected area has agreed objectives and is managed to meet these objectives	3		
5. Protected area design Does the protected area need enlarging,	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible	0	*Possible issue for comment:* does the protected area contain different management zones and are these well maintained?	
	Inadequacies in design mean that achievement of major objectives are constrained to some extent	1		
corridors etc to meet its objectives?	Design is not significantly constraining achievement of major objectives, but could be improved	**2 (x)**	The design of the Park is adequate for the stated objectives, since they include forests that produce water and facilitate the movement of fauna.	
Planning	Reserve design features are particularly aiding achievement of major objectives of the protected area	3		
6. Protected area boundary demarcation Is the boundary known and demarcated?	The boundary of the protected area is not known by the management authority or local residents/neighbouring land users	0	*Possible issue for comment:* are there tenure disagreements affecting the protected area?	
	The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land Users	1		

Issue	Criteria	Score	Comments	Next steps
Context	The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated	**2 (x)**	An important part of the PILA is demarcated and this demarcation is known by environmental, local and community authorities. Nonetheless, part of the materials that mark the border (posts, signs, etc.) have deteriorated which makes it difficult to see the demarcation with exactitude. In critical places, the demarcation of the PILA (sector Yorkin) is being improved, through the installation of signs.	Internal zoning needs to be improved Awareness raising required. Enhanced collaboration with PILA in Costa Rica
	The boundary of the protected area is known by the management authority and local residents and is appropriately demarcated	3		

Issue	Criteria	Score	Comments	Next steps
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 (x)**	The Management Plan is being implemented only in some of its parts, since economic capacity to totally implement it is lacking.,	Internal zoning needs to be harmonized with PILA in Costa Rica, joint monitoring with PILA in Costa Rica
	An approved management plan exists and is being implemented	3		
Additional points *Planning*	The planning process allows adequate opportunity for key stakeholders to influence the management plan	**+1 (x)**	The Management Plan was elaborated a short time ago and will be reviewed at the appropriate moment. with the participation of the key social agents.	
	There is an established schedule and process for periodic review and updating of the management plan	+1		
	The results of monitoring, research and evaluation are routinely incorporated into planning	+1		
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		
	A regular work plan exists and actions are monitored against the plan's targets, but many activities are not completed	**2 (x)**	A regular work plan exists and the actions are being monitored with respect to the work goals, but some activities are not completed.	Support development of action plans, in collaboration with PILA in Costa Rica
	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	There is little or no information available on the critical habitats, species and cultural values of the protected area	0		

Do you have enough information to manage the area?	Information on the critical habitats, species and cultural values of the protected area is not sufficient to support planning and decision Making	**1 (x)**	Research, monitoring and studies of critical habitat, species and cultural values that permit having qualified information for planning and helping in decision making in the action of the protected area is lacking. To this moment, the available information is partial and the scientific studies have been centered on very specific elements. With support of TNC a system is being designed for monitoring 6 elements of conservation of the PILA. This design is in the phase of consensus between TNC, the Panamanian and Costa Rican scientific community and the environmental authorities (MINAE y ANAM).	Binational monitoring should take place More data required on water and soil quality Data on management effectiveness could be improved Development integrated information system Disseminate information

Issue	Criteria	Score	Comments	Next steps
Context	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? *Inputs*	There is no survey or research work taking place in the protected area	**0 (x)**	There is not a research plan per se, although in the Management Plan this was suggested. Nonetheless , scientists are supported with logistic means.	Targeted research grants program to promote research on topics that will facilitate adaptive management
	There is some ad hoc survey and research Work	1		
	There is considerable survey and research work but it is not directed towards the needs of protected area management	2		
	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 addressed	1		
	Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed	**2 (x)**	Lack of technical and management capacities. ,	Binational collaboration should be enhanced and technical training of staff and additional operational resources required
	Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed	3		

Issue	Criteria	Score	Comments	Next steps
12. Staff numbers Are there enough people employed to manage the protected area? *Inputs*	There are no staff	0	There are only 2 people assigned to the protected area, supported by some 30 volunteers. The personnel assigned is clearly insufficient to attend to the needs of the PILA. The Plan of Volunteer Guards continues to be implemented through agreements with NGOs, which has an objective improving the lack of personnel, strengthening the environmental education activities, ecotourism and protection of the PILA.	Technical and operational capacities will be strengthened
	Staff numbers are inadequate for critical management activities	**1 (x)**		
	Staff numbers are below optimum level for critical management activities	2		
	Staff numbers are adequate for the management needs of the site	3		
13. Personnel management Are the staff managed well enough? *Process*	Problems with personnel management constrain the achievement of major management objectives	0	The fundamental problem with the personnel derives from the weakness and technical insufficiencies (both in the management and operational personnel) Better personnel needs to be selected and adequately trained, with the object of contributing to managing with greater efficiency the management objectives.	Technical and operational capacities will be strengthened.
	Problems with personnel management partially constrain the achievement of major management objectives	**1 (x)**		
	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		

Issue	Criteria	Score	Comments	Next steps
14. Staff training Is there enough training for staff?	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 (x)**	The personnel that manages the PILA is trained, but there is need of further strengthening in order to comply with the management objectives.	Technical and operational capacities will be strengthened.
Inputs/Process	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?	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 (x)**	There is an annual budget assigned to the protected area (US$70.000 in 2006), but it is insufficient to attend to all the PILA management needs.	Innovative financial mechanisms will be designed and implemented for supporting protected area management
	The available budget is acceptable, but could be further improved to fully achieve effective management	2		

Issue	Criteria	Score	Comments	Next steps
Inputs	The available budget is sufficient and meets the full management needs of the protected Area	3		
16. Security of budget Is the budget secure? *Inputs*	There is no secure budget for the protected area and management is wholly reliant on Outside or year by year funding	0	The resources come from FIDECO trust (national trust fund). There is however insecurity in the annual budget for the Park as it varies annually.	The project will promote enhanced Government commitment for allocated resources for the management of the protected area and sustainable financing alternatives will be developed
	There is very little secure budget and the protected area could not function adequately without outside funding	1		
	There is a reasonably secure core budget for the protected area but many innovations and initiatives are reliant on outside funding	**2 (x)**		
	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	The budget is poor and limits the effectiveness of conservation actions.	Develop more targeted action plans and improve planning capacities of staff
	Budget management is poor and constrains effectiveness	**1 (x)**		
	Budget management is adequate but could be improved	2		
	Budget management is excellent and aids effectiveness	3		

Issue	Criteria	Score	Comments	Next steps
18. Equipment Are there adequate equipment and facilities? *Process*	There are little or no equipment and facilities	**0**	The equipment and the facilities are very poor. In the neighboring protected area, the Palo Seco Protection Forest in Wetso, there is a ecological center that does not form part of the pILA, but its equipment is used for the PILA. In Guabo (Yorkín) in the sector of Boca Chica there are refuges, but suffer form lack of maintenance. The inexistence of roads obligates the rangers and technicians to go on foot through the PILA, since there are no vehicles nor horses or mules.	Operational capacities need to be strengthened, including visitation infrastructure
	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		
	There are adequate equipment and facilities	3		

Issue	Criteria	Score	Comments	Next steps
19. Maintenance of equipment Is equipment adequately maintained? *Process*	There is little or no maintenance of equipment and facilities	**0 (x)**	Little maintenance is given to the very scarce existing equipment.	Develop a plan for the sustainablity of the maintenance of existing equipment.
	There is some ad *hoc* maintenance of equipment and facilities	1		
	There is maintenance of equipment and facilities, but there are some important gaps in maintenance	2		
	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 (x)**	There is no educational program. The educational program will be designed in the budget for 2006, to be implemented in the year 2007, the budget for the educational program has been assigned by the FIDECO (national trust fund), to be applied to communities, educators, schools and volunteers. It is estimated that the funds will not be sufficient.	The project will support a locally adapted environmental awareness raising program, as well as an interactive program for children and youth developed in association with primary and secondary schools, as well as civil society
	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	There is no contact between managers and neighbouring official or corporate land users	0		

Issue	Criteria	Score	Comments	Next steps
neighbours Is there co-operation with	There is limited contact between managers and neighbouring official or corporate land Users	**1 (x)**	The contacts are limited fundamentally to the Naso-Teribe indigenous population of the neighboring Palo Seco Protection Forest protected area. The Naso population are full collaborators with the PILA Administration. Contacts are being initiated with Bri Bri indigenous population of Panama (Yorkin sector).	Involve as many stakeholders as possible during the Project lifetime (and beyond) pretends to increase contacts between environmental authorities and land-owners
adjacent land users? *Process*	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 management	3		
22. Indigenous people	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area	0		

Issue	Criteria	Store	Comments	Next steps
Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions?	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in the resulting decisions	**1 (x)**	The Naso indigenous population that live in the buffer zone of the PILA formulate suggestions to the administration of the PILA, although they do not participate directly in the decision making.	Co-management activities, as well as others (horizontal exchanges, land-use planning) are intended to involve indigenous communities deeply in the integrated management of the protected area
	Indigenous and traditional peoples directly contribute to some decisions relating to management	2		
Process	Indigenous and traditional peoples directly participate in making decisions relating to management	3		
23. Local communities	Local communities have no input into decisions relating to the management of the protected area	0		
Do local communities resident or near the protected area have input to management decisions? *Process*	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 (x)**	The local communities contribute to a certain extent to the decisions, formulating ideas, suggestions.	Co-management activities, as well as others horizontal exchanges, land-use planning) are intended to involve indigenous communities deeply in the integrated management of the protected area
	Local communities directly participate in Making decisions relating to management	3		
Additional points	There is open communication and trust between local stakeholders and protected area managers	**+1 (x)**	Good communication exists between the environmental authority of the PILA and the indigenous communities, above all with the Naso Terib ethnic group.	Continue this communication, with special attention to improve communication with indigenous communities
Outputs	Programmes to enhance local community welfare, while conserving protected area resources, are being implemented	+1		

Issue	Criteria	Store	Comments	Next steps
24. Visitor facilities Are visitor facilities (for tourists, pilgrims etc) good enough? *Outputs*	There are no visitor facilities and services	**0 (x)**	*Possible issue for comment:* Do visitors damage the protected area? There are no facilities for use by visitors. In the neighboring population of Wetso (an area protected by the Palo Seco Protection Forest) an ecological center managed by the indigenous Naso-Teribe indigenous population counteracts these deficiencies. Damages are not produced by tourists, except for those derived by the use of paths.	Promotion of tourism development creating production chains between the upper sub-basins and the middle and coastal area will improve the enabling conditions for tourism (including facilities)
	Visitor facilities and services are Inappropriate for current levels of visitation or are under construction	1		
	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		
25. Commercial tourism	There is little or no contact between managers and tourism operators using the protected area	**0 (x)**	Possible issue for comment: examples of contributions There is no contact between the tourism operators and the PILA administration, since the tourists who arrive do so without using these tourism operators. Operators in Costa Rica have visited the administration of the PILA to explore the possibilities of collaboration in this area.	Creation of collaboration between authorities and tourism operators

Issue	Criteria	Score	Comments	Next steps
Do commercial tour operators contribute to protected area management? *Process*	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 area values	2		
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts	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	An entrance fee is charged for entering the PILA (3 Balboas for foreigners and 1 Balboa for nationals). The money does not remain with the Administration of the Park, but rahter goes to the central government, without any part going to the Administration of the PILA	The entrance fee to the PILA will be increased shortly to obtain more economiic resources to 5 Balboas for foreigners and 2 Balboas for nationals.
	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 (x)**		
27. Condition assessment Is the protected area being managed	Important biodiversity, ecological and cultural values are being severely degraded		*Possible issue for comment:* It is important to provide details of the biodiversity, ecological or cultural values being affected	
	Some biodiversity, ecological and cultural values are being severely degraded	1		

Issue	Criteria	Score	Comments	Next steps
	Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted	**2 (x)**	Of the 16,836 hectares of the PILA that foms part of the Binational Sixaola River Basin, 4,000 hectares have been deforested and converted to pasture, affecting forests, fauna, soil and water. This process is largely driven by Latinos (in the majority) and some indigenous populations of the Ngöbe-Buglé ethnic group.	The integrated monitoring and evaluation system to be developed by the Project will contribute to shed Light on this issue
Outcomes	Biodiversity, ecological and cultural values are predominantly intact	3		
Additional points *Outputs*	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone	**+1 (x)**	To date, no program of restoration of degraded areas has been implemented in the interior of the PILA and its buffer area.	Support putting into action the plans of restoring the degraded ecosystems.
28. Access assessment	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated objectives	0		

Issue	Criteria	Score	Comments	Next steps
Is access/resource use sufficiently controlled? *Outcomes*	Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives	1	The only existing system of protection for the control of access to the PILA and avoiding the development of inadequate uses of the land are the resource guards and the participation of volunteers and Naso Teribe indigenous of the buffer area. The effectiveness of this system is relatively good.	Promote co-management arrangements.
	Protection systems are moderately effective in controlling access or use of the reserve in accordance with designated objectives	**2 (x)**		
	Protection systems are largely or wholly effective in controlling access or use of the reserve in accordance with designated objectives	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	*Possible issue for comment:* how does National or regional development impact on the protected area?	
	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 to the regional economy	**2 (x)**	The Naso-Teribe indigenous population has been economically favored by the existence of the PILA, although not in an intense form. The indigenous sell the food products to the tourists and work in development of infrastructure in the PILA.	New alternative livelihoods based on the sustainable use of biodiversity should be developed (incl. eco-tourism)
	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area (e.g. employment of locals, locally operated commercial tours etc)	3		
30. Monitoring and evaluation Are management activities monitored against performance? *Planning/Process*	There is no monitoring and evaluation in the protected area	0	The PILA has a monitoring and evaluation strategy that is carried out every year in close contact with the principal social actors.	Monitoring systems for biodiversity, water and land will be improved.
	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		
	A good monitoring and evaluation system exists, is well implemented and used in adaptive management	**3 (x)**		
TOTAL		**45**		

Appendix E2:
BD-2 "Mainstreaming Biodiversity in Production Landscapes and Sectors" GEF Tracking Tool

GEF

Integrated Ecosystem Managament in the Binational Sixaola River Basin (RS-X1017)

Appendix E2:Tracking Tool for GEF Biodiversity Focal Area Strategic Priority Two: "Mainstreaming Biodiversity in Production Landscapes and Sectors" [1]

[1] This is a translation from Spanish.

I. Project General Information

1. Project name:

Integrated Ecosystem Management of the Sixaola Binational River Basin

2. Country (ies):

Costa Rica and Panama

National Project:_____ Regional Project:__**X**__ Global Project:_____

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

	Name	**Title**	**Agency**
Work Program Inclusion	IDB (Henrik Franklin), Consultancy Firm (EPYPSA/INCLAM/CEDARENA)	Project Team Leader	IDB
Project Mid-term			
Final Evaluation/project completion			

4. Funding information

GEF support:_____3,500,000___
Co-financing:_____15,875,000___
Total Funding:_____19,375,000___

5. Project duration: ***Planned***___**4**____ years ***Actual*** _____ years

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

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

INTERAMERICAN DEVELOPMENT BANK (IADB)

7. GEF Operational Program:

□ drylands (OP 1)
□ coastal, marine, freshwater (OP 2)
□ forests (OP 3)
□ mountains (OP 4)
□ agro-biodiversity (OP 13)
X integrated ecosystem management (OP 12)
□ sustainable land management (OP 15)

Other Operational Program not listed above:_____

8. Project Summary (one paragraph):

The proposed Project will contribute to address a series of interrelated and emerging threats to the biodiversity, water and land resources in the Sixaola Bi-national River Basin shared by Costa Rica and Panama. This will be achieved by promoting an integrated ecosystem management approach, involving and empowering stakeholders in the two countries. The proposal is consistent with the *Regional Sustainable Development Strategy (RSDS) for the bi-national Sixaola River Basin,* which has been formulated jointly and in a participatory manner by the involved stakeholders. The Strategy will be implemented through two national programs, the *Sustainable Development Program of Bocas del Toro* in Panama, and the *Sustainable Development Program for Sixaola* in Costa Rica, both financed through loans from the Inter-American Development Bank. The GEF resources will serve to cover the incremental costs related to the global benefits of integrated management of the Basin, and each national program will serve to cover the investments necessary to create a true, sustainable development model for the benefit of local populations as well as the two countries as a whole.

9. Project Development Objective:

Contribute to the improvement of the health and integrity of the ecosystems, as well as the well-being of the population in the bi-national Sixaola River basin

10. Project Purpose/Immediate Objective:

Contribute to the sustainable use and conservation of biodiversity, water, and soil resources, through the creation of an enabling environment and integral, cross-cutting management of the bi-national Sixaola River basin

11. Expected Outcomes (GEF-related):

The project consists of three Outcomes as follows:

Outcome 1: strengthen the bi-national institutional framework for integrated basin management and enhance the required technical and operational capacities of the involved institutions, indigenous organizations, and civil society organizations

Outcome 2: promote the adoption of productive models that are compatible with the conservation and sustainable use of the water and soil resources

Outcome 3: promote the conservation and sustainable use of globally important biodiversity.

12. Production sectors and/or ecosystem services directly targeted by project:

12. a. Please identify the main production sectors involved in the project. Please put "**P**" for sectors that are primarily and directly targeted by the project, and "**S**" for those that are secondary or incidentally affected by the project.

Agriculture: **P**
Fisheries:
Forestry: **P**
Tourism: **S**
Mining:_____
Oil:_____
Transportation:_____
Other (please specify):_____

12. b. For projects that are targeting the conservation or sustainable use of ecosystems goods and services, please specify the goods or services that are being targeted, for example, water, genetic resources, recreational, etc:

1. Water
2. Soils
3. Recreation
4. Biodiversity

II. Project Landscape/Seascape Coverage

13. a. What is the extent (in hectares) of the landscape or seascape where the project will directly or indirectly contribute to biodiversity conservation or sustainable use of its components? An example is provided in the table below.

Targets and Timeframe (See explanatory note) **Project Coverage**	**Foreseen at project start**	**Achievement at Mid-term Evaluation of Project**	**Achievement at Final Evaluation of Project**
Landscape/seascape[2] area directly[3] covered by the project (ha)	Sixaola Binational Basin: 290,000 ha (Land) and 9,000 ha (Sea)		
Landscape/seascape area indirectly[4] covered by the project (ha)	Does not apply		

Explanation for indirect coverage numbers: Not applicable

[2] For projects working in seascapes (large marine ecosystems, fisheries etc.) please provide coverage figures and include explanatory text as necessary if reporting in hectares is not applicable or feasible.
[3] Direct coverage refers to the area that is targeted by the project's site intervention. For example, a project may be mainstreaming biodiversity into floodplain management in a pilot area of 1,000 hectares that is part of a much larger floodplain of 10,000 hectares.
[4] Using the example in footnote 5 above, the same project may, for example, "indirectly" cover or influence the remaining 9,000 hectares of the floodplain through promoting learning exchanges and training at the project site as part of an awareness raising and capacity building strategy for the rest of the floodplain. Please explain the basis for extrapolation of indirect coverage when completing this part of the table.

13. b. Are there Protected Areas within the landscape/seascape covered by the project? If so, names these PAs, their IUCN or national PA category, and their extent in hectares.

	Name of Protected Areas	**IUCN and/or national category of PA**	**Extent in hectares of PA**
1.	International Park La Amistad (PILA) (Costa Rica)	II. National Park/National Park in Costa Rica	174,881 ha
2.	Wild Life Refuge Gandoca Manzanillo (REGAMA) (Costa Rica)	V. Protected Landscape/Seascape /Refugio Nacional de Vida Silvestre in Costa Rica	Land: 4,876 ha Marine: 4,500 ha
3	International Park La Amistad (PILA) (Panama)	II. National Park/ National Park in Panama	207,000 ha
4.	Swamp of International Importance San San Pond Sack (HIISSPS)	VI. Managed Resource Protected Area/Swamp of International Importance in Panama	Land: 20,025 ha Marine: 4,500 ha

III. Management Practices Applied

14.a. Within the scope and objectives of the project, please identify in the table below the management practices employed by project beneficiaries that integrate biodiversity considerations and the area of coverage of these management practices? Note: this could range from farmers applying organic agricultural practices, forest management agencies managing forests per Forest Stewardship Council (FSC) guidelines or other forest certification schemes, traditional fishermen practicing sustainable fisheries management, or industries satisfying other similar agreed international standards, etc. An example is provided in the table below.

Targets and Timeframe **Specific management practices that integrate BD**	**Area of coverage foreseen at start of project**	**Achievement at Mid-term Evaluation of Project**	**Achievement at Final Evaluation of Project**
1.Agroforesty system	2,440 hectares of agro-forestry systems in the indigenous territories of the middle basin		
2.Organic cacao, plantain and banana	Achieve the conversion of 240 hectares of intense cultivations into less intensive ones in the low basin		

14. b. Is the project promoting the conservation and sustainable use of wild species or landraces?

__**X**_Yes___No

If yes, please list the wild species (WS) or landraces (L):

Species (*Genus sp*., and common name) **(*)**	Wild Species (please check if this is a wild species)	Landrace (please check if this is a landrace)
1. *Ctenosaura quiquecarinata and Ctenosaura similis* (Iguana)	Yes	No
Orchids	Yes	No
Heliconias	Yes	No

(*) These are animal or vegetable species currently subject to pressure by human use, for which sustainable breeding will be promoted (breeding farms and production nurseries for ornamental plants). The project will also have a positive impact on other species of flora and fauna that have not been listed in the table

14. c. For the species identified above, ***or other target species of the project not included in the list above (E.g., domesticated species)***, please list the species, check the boxes as appropriate regarding the application of a certification system, and identify the certification system being used in the project, if any. An example is provided in the table below.

Certification **Species**	A certification system is being used	A certification system will be used	Name of certification system if being used	A certification system will not be used
1. *Ctenosaura quiquecarinata and Ctenosaura similis* (Iguana)	No	No		
Orchids	No	No		
Heliconias	No	No		

14. d. Is carbon sequestration an objective of the project?

Yes (X) **No**

If yes, the estimated amount of carbon sequestered is:

IV. Market Transformation and Mainstreaming Biodiversity

15. a. **For those projects that have identified market transformation as a project objective**, please describe the project's ability to integrate biodiversity considerations into the mainstream economy by measuring the market changes to which the project contributed.
The sectors and subsectors and measures of impact in the table below **are illustrative examples, only**. Please complete per the objectives and specifics of the project.

Name of the market that the project seeks to affect (sector and sub-sector)	**Unit of measure of market impact**	**Market condition at the start of the project**	**Market condition at midterm evaluation of project**	**Market condition at final evaluation of the project**
Sustainable agriculture : Agro-forestry	Does not apply			
Sustainable agriculture: organic banana and cacao	Does not apply			

15. b. Please also note which (if any) market changes were directly caused by the project.

V. Improved Livelihoods

16. For those projects that have identified improving the livelihoods of a beneficiary population based on sustainable use /harvesting as a project objective, please list the targets identified in the logframe and record progress at the mid-term and final evaluation. An example is provided in the table below

Improved Livelihood Measure	**Number of targeted beneficiaries (if known)**	**Please identify local or indigenous communities project is working with**	**Improvement Foreseen at project start**	**Achievement at Mid-term Evaluation of Project**	**Achievement at Final Evaluation of Project**
Support for agro-forestry systems	a. 120 producers		a. 240 new ha under indigenous agro-forestry systems		
b. Support development of sustainable use of native species (orchids, heliconias, breeding of fauna) and eco-tourism initiatives	b. 200 people	Bri Bris in Panamá and Talamanca (Costa Rica) and Cabécar of Talamanca (Costa Rica) and other non-indigenous communities in the two countries	b. 10 feasibility studies and 5 pilot initiatives		
c. Promote dialogue with credit institutions for developing innovative instruments to support alternative livelihoods based on the sustainable use of biodiversity	c. N/A		c. At least 1 new instruments developed		

VI. Project Replication Strategy

17. a . Does the project specify budget, activities, and outputs for implementing the replication strategy? Yes___**X**__ No___

COMMENT: *The repeatability has been considered a fundamental action and is contemplated as a transversal action included in the project's three components*

17. b. Is the replication strategy promoting incentive measures & instruments (e.g. trust funds, payments for environmental services, certification) within and beyond project boundaries?
Yes_ **X** __ No__**__**

If yes, please list the incentive measures or instruments being promoted:

1. Payment for environmental services
2. Establishment of a Trust Fund for the Basin
3. Definition of projects of public recognition for companies that adopt better practices; adaptation of recognitions such as the blue flag that are also being granted to companies in Costa Rica
4. Collaboration so producers can obtain certification of their organic production

17. c. For all projects, please complete box below. Two examples are provided.

Replication Quantification Measure (Examples: hectares of certified products, number of resource users participating in payment for environmental services programs, businesses established, etc.)	**Replication Target Foreseen at project start**	**Achievement at Mid-term Evaluation of Project**	**Achievement at Final Evaluation of Project**
Hectares of restored landscape contributing to biological corridors	100 ha		
Hectares of new indigenous agroforestry systems	240 ha		
Hectares of agro-chemically intensive agriculture shifted to sustainable production	2,440		
Protected area co-management contracts under operation	2		

VII. Enabling Environment

For those projects that have identified addressing policy, legislation, regulations, and their implementation as project objectives, please complete the following series of questions*:* 18a, 18b, 18c.

An example for a project that focused on the agriculture sector is provided in 18 a, b, and c.

18. a. Please complete this table at **work program inclusion for each sector** that is a primary or a secondary focus of the project.

Please answer YES or NO to each statement under the sectors that are a focus of the project.

Sector **Statement: Please answer YES or NO for each sector that is a focus of the project.**	**Agriculture**	**Fisheries**	**Forestry**	**Tourism**	**Other (please specify)**	**Other (please specify)**
Biodiversity considerations are mentioned in sector policy	YES		YES	YES		
Biodiversity considerations are mentioned in sector policy through specific legislation	YES		YES	YES		
Regulations are in place to implement the legislation	YES		YES	YES		
The regulations are under implementation	NO		NO	NO		
The implementation of regulations is enforced	NO		NO	NO		
Enforcement of regulations is monitored	NO		NO	NO		

18. b . Please complete this table at **the project mid-term for each sector** that is a primary or a secondary focus of the project. Please answer YES or NO to each statement under the sectors that are a focus of the project.

Sector **Statement: Please answer YES or NO for each sector that is a focus of the project.**	**Agriculture**	**Fisheries**	**Forestry**	**Tourism**	**Other (please specify)**	**Other (please specify)**
Biodiversity considerations are mentioned in sector policy						
Biodiversity considerations are mentioned in sector policy through specific legislation						
Regulations are in place to implement the legislation						
The regulations are under implementation						
The implementation of regulations is enforced						
Enforcement of regulations is monitored						

18. c. Please complete this table at **project closure for each sector** that is a primary or a secondary focus of the project. Please answer YES or NO to each statement under the sectors that are a focus of the project.

Sector **Statement: Please answer YES or NO for each sector that is a focus of the project.**	**Agriculture**	**Fisheries**	**Forestry**	**Tourism**	**Other (please specify)**	**Other (please specify)**
Biodiversity considerations are mentioned in sector policy						
Biodiversity considerations are mentioned in sector policy through specific legislation						
Regulations are in place to implement the legislation						
The regulations are under implementation						
The implementation of regulations is enforced						
Enforcement of regulations is monitored						

All projects please complete this question at the project mid-term evaluation and at the final evaluation, if relevant:

18. d. Within the scope and objectives of the project, has the private sector undertaken **voluntary** measures to incorporate biodiversity considerations in production? If yes, please provide brief explanation and specifically mention the sectors involved.

An *example* of this could be a mining company minimizing the impacts on biodiversity by using low-impact exploration techniques and by developing plans for restoration of biodiversity after exploration as part of the site management plan.

_____
_____
_____
_____

VIII. Mainstreaming biodiversity into the GEF Implementing Agencies' Programs

19. At each time juncture of the project (work program inclusion, mid-term evaluation, and final evaluation), please check the box that depicts the status of mainstreaming biodiversity through the implementation of this project with on-going GEF Implementing Agencies' development assistance, sector, lending, or other technical assistance programs.

Time Frame **Status of Mainstreaming**	**Work Program Inclusion**	**Mid-Term Evaluation**	**Final Evaluation**
The project is not linked to IA development assistance, sector, lending programs, or other technical assistance programs.			
The project is indirectly linked to IAs development assistance, sector, lending programs or other technical assistance programs.			
The project has direct links to IAs development assistance, sector, lending programs or other technical assistance programs.	YES Sixaola Binatonal River Basin Sustainable Development Program Bocas del Toro Sustainable Development Program		
The project is demonstrating strong and sustained complementarity with on-going planned programs.	YES		

IX. Other Impacts

20. Please briefly summarize other impacts that the project has had on mainstreaming biodiversity that have not been recorded above.

The project contemplates a dialogue with Costa Rica and Panama's public and private credit institutions in order to achieve the establishment of credit lines in special conditions that take into consideration the specifics of the projects of sustainable use of biodiversity.

Appendix F:
Monitoring and Evaluation Plan

APPENDIX F: Monitoring and Evaluation Plan

A. Monitoring and reporting structures

1.1 The following periodic reporting instruments will facilitate the monitoring and evaluation of Project results and impacts, as well as facilitate the adaptive management on behalf of the Project Executing Unit and provide guidance to the planning and management decisions of the Binational Commission for the Sixaola River Basin.

1.2 ***Day-to-day monitoring***. The Project will operate based on detailed Annual Work Plans developed by the beginning of each project year. These work plans will define activities to be carried out and results to be generated throughout the year. The work plan will have a series of short-term process indicators that define project delivery. The Project team will perform day-to-day monitoring of these indicators to ensure that the project intervention is on-track and delivers the expected results. The Annual Work Plans will be approved by the Binational Commission for the Sixaola River Basin, which will empower the stakeholders in the Basin and enhance their interest and commitment to the intervention.

1.3 ***Mid-year Progress Reports***. Half-way through each Project year, the Project team will write a summary report to IDB/GEF and the Binational Commission for the Sixaola River Basin, in order to inform on the progress made during the first six months execution of the Annual Work Plan. The Mid-year Progress Report will focus on short-term results and challenges, and will be less detailed than the Annual Project Report.

1.4 ***Annual Reviews***. At the end of each Project year, the Project team will elaborate an *Annual Project Report* to summarize project results. The annual report should include considerations on: (i) project performance over the past year, including key results produced and, where possible, information on the progress on the Project objective, (ii) identification of constraints and unforeseen barriers for the Project in its work to achieve its objectives, the reasons for these constraints, and what is being done to overcome them, (iii) expenditure reports, (iv) lessons learned, and (v) recommendations for adaptive management of the Project strategy to optimize impact of the intervention.

1.5 ***GEF Project Implementation Review***. In addition to the Annual Project Report, the Project team will elaborate a compulsory *GEF Project Implementation Review (PIR)*, in collaboration with the designated IDB task manager. The PIR is collected, reviewed and analyzed by the IDB before it is sent to the GEF Independent M&E unit.

1.6 ***Reports and publications***. To document the lessons learned and knowledge generated through the Project intervention, the Project executing team will elaborate technical reports on a variety of issues, not least on integrated ecosystem management approaches. These reports will: (i) hold the Project team accountable with regard to its responsibility to generate technical results at the highest level, (b) help summarize and document the Project's results, and (c) serve to disseminate and replicate the Project's lessons learned

and knowledge to interested parties in the participating countries, in the wider region, as well as world-wide.

1.7 Results which are deemed particularly important and that are of interest beyond the Sixaola River Basin will be disseminated through Project Publications. These publications can be scientific or technical, and made available in the form of journal articles, multimedia publications etc. Collaboration will also be sought with regional and national academic and training institutions (eg. CATIE, EARTH, CATHALAC) in terms of dissemination of best practice and involving students and researchers in matters relating to the integrated management of the Basin. The Project's publication strategy will be determined in collaboration with the IDB and executing partner institutions. A Project web-site will also facilitate dissemination of results. Socialization of Project results will also be ensured at both formal and informal local events and meetings (for example amongst indigenous communities).

B. Independent evaluations

1.8. *Mid-term Review.* A mid-term review[1] will be carried out when 50% of the GEF resources have been disbursed or after 24 months after the Project contract goes into effect, whichever comes first. The review will determine if the project strategy is generating the desired impact, or if adjustments are necessary to ensure the achievement of Project objectives. The review team will focus on the effectiveness, efficiency and timeliness of project implementation. It will highlight issues that requires decision and action, and it will provide preliminary lessons learned about Project design, implementation, and management. Particular attention will be paid to the question if the involved institutions seem to be internalizing and mainstreaming Project results into their work, as well as progress to ensure financial sustainability of the Project, but the review team will scrutinize progress on all of the project's indicators. Progress in the BD1 and BD2 Tracking Tools will also be assessed in a participatory manner during the mid-term review. Recommendation of the Mid-term Review will be an important input for the Project staff, as well as for IDB and the implementing partners, in assessing progress, as well as possible needs for change during the second half of the Project's lifespan.

1.9. *Final Evaluation.* By the end of the Project, a Final Evaluation will be performed, to determine if the Project indeed reached its objectives. The evaluation will be performed by an independent team of experienced expert(s), retained by the IDB. The evaluation team will evaluate the Project's results both in terms of ensuring global environmental benefits, as well as local and national benefits. The evaluation team will identify lessons learned and particular successful Project results, and these will be disseminated broadly in the two countries, and to other IDB and GEF financed projects in the region. The team will moreover evaluate the sustainability of Project results, and recommend to the involved parties how they could further enhance sustainability. Finally, progress in the BD1 and BD2 Tracking Tools will also be assessed in a participatory manner during the final evaluation.

[1] The Mid-term and final evaluations will be performed by a team of consultants contracted by the IDB, using the fee resources provided by the GEF.

1.10. *Other evaluations.* In addition to the compulsory independent Mid-term Review and Final Evaluation, the Project may participate in program-specific or thematic evaluations performed by the GEF Evaluation Office to determine effectiveness and impact of the overall GEF portfolio. The Project may also participate in evaluations of country programs to determine effectiveness of the Project portfolios of participating institutions.

C. Learning and knowledge sharing

1.11. In addition to publications and reports mentioned above, the lessons learned and knowledge generated throughout the project intervention will be shared widely through networking with interested parties outside the basin. To increase dialogue, the project will participate in information exchange and learning network, such as those promoted by GEF, CCAD, IUCN, CATHALAC, such as IW/LEARN, Global Transboundary Protected Areas Network of World Commission Protected Areas/IUCN and the Global Water Partnership, and other technical forums. The Project will sponsor several national, binational and regional workshops on topics related to the development of the Project.

D. Monitoring Plan

1.12. *Monitoring Strategy.* Building on existing initiatives promoted by associated partners[2] in the Basin, the Project Executing Unit will coordinate the collaborative development of a permanent, integrated and cost-effective monitoring system for the state of the Basin's biodiversity, soil, and water resources will be established (see Project Components 2, 3) to facilitate decision making-processes and adaptive management by the stakeholders. These systems will be internalized in existing institutions (through agreements clearly defining responsibilities), involving their staff and other local stakeholders, in order to ensure continuity after the life of the Project[3]. This system will not only provide valuable information on the state of the Basin linked to some of the Project indicators at the Goal and Purpose level [4]defined in the log frame matrix (Annex B to the GEF Executive Summary), but will also be used for the continuous monitoring of Project effects (results). Within the first year, the Project Executing Unit will ensure the consolidation of the baseline information for all indicators in the log-frame. The total estimated costs for monitoring and evaluation are US$285,000[5] (See Table 1).

1.13. As per IDB guidance, monitoring and evaluation at the Project level will be oriented by the following key questions: (1) Is the Project successfully contributing to mainstreaming biodiversity considerations in Basin planning and development and catalyzing the sustainability of the transboundary protected areas?, (2) Are producers internalizing

[2] For example in the Sustainable Development Program in Bocas del Toro (1439/OC-PN), TNC, CI, ANAI.

[3] The project will actively use the GEF BD-1 and BD-2 Tracking Tools to measure the effectiveness of protected area management and the mainstreaming of biodiversity into production landscapes.

[4] These indicators have been selected following GEF guidance in IW, including **regional process indicators** (eg. related to the functioning of the Binational Commission), **stress reduction indicators** (eg. related to changes in productive habits, and **environmental indicators** (eg. changes in state of the biodiversity, water and land resources)

[5] These costs include US$50,000 for the Mid-term Review and Final Evaluation which will be covered by the GEF fee to the IDB (in other words they are not charged to the GEF grant of the Full Size Project)

sustainable production methods, thereby contributing to reduce land degradation processes and contamination of rivers and streams?, (3) Is the Basin wide governance structure enabling the involved stakeholders (institutions, social, ethnic, and other civil society groups) to function in an effective and coordinated manner to reach the goals outlined in the Regional Sustainable Development Strategy (RSDS)?, (4) Is the Project contributing to enable basic integrated basin management functions to be financially sustainable in the long term?, and (5) Is the Project contributing to enhance the environmental quality of the Basin?

1.17. *Data Collection and Analysis.* Some monitoring activities can be done through desk-study of written documents, such as reports, work plans, and meeting minutes. Other information related to regional process indicators [6](e.g. the effectiveness and efficiency of the binational institutional set-up), will be done mainly through evaluations and interviews with institutional actors and stakeholders, as well as the review of meeting reports, minutes and agreements of the Binational Commission for the Sixaola River Basin. In terms of stress reduction indicators, (eg. the extent to which farmers shift towards more sustainable land use practices compatible with the conservation of biodiversity, soil and water resources) will be assessed using both direct (eg. # of hectares of sustainable production) and indirect (eg. amount of resources dedicated to sustainable production in the Basin). Finally, environmental indicators (eg. water quality, soil condition, ecosystem health) will be measured through a combination of cost-effective methodologies, including inventories, aerial imagery, participatory methods (eg. reporting of illegal hunting, observed wildlife amongst local population and tourists), measurement of the Biotic Integrity Index (bioindicator which is already being used in the Basin to determine water quality).

1.18. Table 1 below summarizes the monitoring plan for the **outcome** indicators at the Project Goal and Purpose level[7], indicating: (a) definition of the outcome indicator, (b) indication of the type of indicator (see footnote 4 above), (c) correspondence to key IDB questions (see paragraph 1.13 above), (d) baseline value and target, (e) method/means of verification, (f) periodicity, (g) responsible party, (h) an indication of the expenditure category (component # or administrative costs), and (i) the estimated costs associated with the monitoring of each indicator.

[6] See footnote 4.
[7] The output indicators at the component/activity level will be monitored on a continuous basis by the Project Executing Unit.

Table 1: Tentative monitoring plan of indicators at the goal and purpose level								
Impact Indicator	**Type of Indicator (see footnote 4 above)**	**Responding to key IDB question (see paragraph 1.13 above)**	**Baseline value and target**	**Method/Means of verification**	**Perio-dicity**	**Responsible Party**	**Charged to Component or Administrative Costs?**	**Cost US $**
GOAL LEVEL								
Three years after the end of the Project, the area of natural forest cover in the Basin is the same or has expanded compared to the level at the end of Year 1	Environmental	1	Baseline : 261,700 hectares Target: at least 261,700 hectares	Aerial photography Official forest cover statistics	Every 2 years	Project Executing Unit (PEU) ANAM, MINAE	Component 3	12,000
Three years after the end of the Project, the Social Development Index (SDI) (Costa Rica) and Human Development Index (HDI) (Panama) express improvements compared with level at the end of year one of the project	N/A	N/A	Baseline : SDI: 0 and HDI: 0.608 Target: SDI and HDI improved	National surveys and statistics	Every 2 years	PEU MEF MIDEPLAN	Administrative (costs related staff time of PEU)	500
Three years after the end of the Project, annual public investment for the binational integrated ecosystem management in the Basin has increased compared to marginal annual contributions at beginning of the Project	Regional process	4	Baseline: To be determined by end of Year 1 Target: an increase by 10%	Review of public institutions' work plans and budgets	Yearly	PEU MEF MIDEPLAN	Administrative (costs related staff time of PEU)	500
Three years after the end of the Project, water quality in the Binational Sixaola River Basin is the same or has improved compared to the level at the end of Year 1, as shown by the Biotic Integrity Index (BII) in the Yorkín micro-watershed	Environmental	5	Baseline: BII level at Yorkin micro-watershed: good (3)[8] Target: BII level at Yorkin micro-watershed: at least good (3)	Monitoring reports of the BII	Yearly	PEU MINAE ANAM Academic Institution, NGO tbd	Component 2	40,000
Three years after the end of the Project, populations of key species in the representative ecosystems in the Basin maintain stability compared to their levels at the end of Year 1	Environmental	5	Baseline and Target: Baseline levels and targets for indicator species will be generated during year 1	Biodiversity Monitoring (inventories)	Every 2 years	PEU	Component 3	110,000

[8] The scale goes from 1-5 where, 1 is poor and 5 is excellent. During the Project start-up phase, complementary water quality indicators will also be considered.

Table 1: Tentative monitoring plan of indicators at the goal and purpose level								
Impact Indicator	**Type of Indicator (see footnote 4 above)**	**Responding to key IDB question (see paragraph 1.13 above)**	**Baseline value and target**	**Method/Means of verification**	**Perio-dicity**	**Responsible Party**	**Charged to Component or Administrative Costs?**	**Cost US $**
PURPOSE LEVEL								
At the end of the Project, the Binational Commission for the Sixaola River Basin is operating efficiently and is taking decisions in a participatory manner based on accurate technical information	Regional process	3	Baseline: at the project start up, the Commission will have been formally created, but it would not have practical experience. Territorial Information System (TIS) exists but is underused Target: Commission established, working efficiently and making decisions based in accurate information.	Review of meeting minutes and agreements of the Binational Commission for the Basin Number of site visits to the TIS	Yearly	PEU Binational Commission for the Basin	Administrative (costs related staff time of PEU)	3,500
By the end of the Project, land-use conflicts, defined in terms of optimal vs actual land-use, have been reduced by a third compared to the level at the end of Year 1.	Strees reduction	1 and 2	Baseline levels and targets will be generated during year 1	Aerial photograph, over flights and field inspections, as well as participatory methods (interviews with farmers)	Every 2 years	PEU	Component 2	20,000
By the end of the Project, alternative sustainable financing sources leveraged at the national or local level are covering at least 10% of the recurrent costs related to	Regional process	4	Baseline: levels will be generated during year 1	Review of public institutions' work plans and budgets	Every 2 years	PEU	Administrative (costs related staff time of PEU)	3,500

Table 1: Tentative monitoring plan of indicators at the goal and purpose level								
Impact Indicator	**Type of Indicator (see footnote 4 above)**	**Responding to key IDB question (see paragraph 1.13 above)**	**Baseline value and target**	**Method/Means of verification**	**Perio-dicity**	**Responsible Party**	**Charged to Component or Administrative Costs?**	**Cost US $**
the integrated binational management of the Basin compared to marginal domestic allocations at the beginning of the Project			Target: 10% of recurrent costs for Basin management are covered with alternative resources	Records of the Basin Trust Fund Financing agreements				
By the end of the Project, at least 20% of the land-surface dedicated to agro-chemically intensive banana production at the beginning of the Project is shifted to sustainable production	Stress reduction	2	Baseline: 12,400 hectares of banana production with intensive use of agrochemicals Target: 2,440 hectares converted to sustainable production.	Field inspections and interviews	Every 2 years	PEU	Administrative (costs related staff time of PEU)	5,000
By the end of the Project, ·critical elements of the management plans of the transboundary protected areas are harmonized between the two countries and management actions are carried out according to these plans	Regional process	2 and 3	Baseline: at the begining of the Project PILA CR and PN have separate plans ,as did San do San Pond Sak and Gandoca Manzanillo Target: critical elements of the management plans are harmonized	Reports from Trans/boundary Protected Areas Commissions on the implementation of management plans Contracted evaluation on management effectiveness	Every 2 years	PEU Trans-boundary Protected Areas Commissions	Component 3	20,000
SUBTOTAL								**215,000**
Costs related to monitoring report writing, data management by Project Executing Unit staff (US$5,000/year)								**20,000**
Mid-term review and final evaluation								**50,000**
TOTAL								**285,000**

Appendix G:
Threat and Root Cause Analysis

APPENDIX G

THREATS AND ROOT CAUSES ANALYSIS[1]

A. Background on the environmental conditions in the Sixaola Binational River Basin

Biogeographical aspects[2]

The Binational Sixaola River Basin is located on the Caribbean slope of the Talamanca (Costa Rica)-Central (Panama) mountain range, in the SE extremes of Costa Rica and NW of Panama, with the geographic coordinates: 9º 15' and 9º 40' N latitude and 82º 50' and 83º 30' W longitude. The Basin has a drainage area of 289,000 hectares, of which 81% belongs to Costa Rica and 19% to Panama. Its borders, in the NW-SE direction, are located in the Fila Carbón watershed, to the N in the Tsibúpeta, Kirióbeta ridges and part of Fila Carbón. From the W and S-SE, the Basin is defined by the Talamanca-Central mountain range (coinciding with the Pacific-Atlantic divide); with very dynamic mountains in the Chirripó Grande massif (3.820 m.a.l.s.) -the highest point of the Basin-. To the, S the Basin is located in the Fila Kaskicha.

The Basin is composed of three large morphological divisions: *Coastal marine plains*, characterized by the coastal influence in regard to the origin of the mountainous forms and the main processes occurring within them. *Flood plains*, connected to the most important water courses (Sixaola and Telire), and *Mountains*, that occupy close to 70% of the watershed, from the area surrounding the coastal plains to the W extreme of the watershed. Different elevations and morphologies of the Basin allow three distinct sectors with unique characteristics to be identified: the *upper sub-basin*, areas of higher elevation and orographical complications; the *middle sub-basin*, corresponding to the Talamanca valley and the hillsides of the mountains that surround it; and, lastly the *lower sub-basin*, corresponding to the Sixaola River valley, the surrounding medium mountains and coastal plains.

The orographical difficulties of the physical-natural environment influence the distribution of the 33,500 people inhabiting the Basin[3]. In the upper sub-basin, there are 848 people from the Bri Bri and Cabécar ethnic groups (0.42 inhab/hectare); in the middle, 8,375 (16.4 inhab/ hectare), of which 94% are indigenous populations from the same ethnic groups. The indigenous territories are located in the middle sub-basin, where 8,375 people are located in two well defined sectors: the Talamanca valley and the Yorkín sub-basin. In the first one, there are 7,231 people, and in the second 1,119 people, the majority being indigenous populations. In the lower part of the basin, 24,358 people live (72.5 inhab/ hectare), dominated mainly by the Latin population and in fewer numbers, Afrodesendents and

[1] This document constitutes a completion to the analysis of the threats and root causes presented in the main document.
[2] Study of the physical-natural environment and demography. Regional Strategy of the Sixaola Binational River Basin, 2003.
[3] Of the total inhabitants: 19,500 (58%) live in Costa Rica (Talamanca region) and 14,000 (42%) in Panama (District of Changinola).

native indigenous (Bri Bri and Cabécar) and non-native indigenous (Ngöbe-Buglé) populations.

Biological Diversity

The Basin contains spectacular biodiversity and ecosystems of global importance. Representing one of the few larger tracts of virtually untouched forest in Central America the basin boasts impressive species density and endemism (Kappelle and Brown, 2001). It also harbors important populations of threatened and endangered species of top conservation priority and represents valuable resting and feeding areas for migratory bird species.

A large part of the Basin (about 89%) is covered with forests that contain a variety of ecosystems including rare and fragile paramo and cienaga[4]. The Talamanca-Central mountain range contains at least 10% of the main habitat types of the planet (Sayce and Sotomayor, 2004), and the mountainous region has been classified as one of the 200 global priority ecoregions defined by GEF (Olson et al. 2001). In the upper river sub-basin, the La Amistad International Park (PILA) alone harbors an estimated 4% of the planet's terrestrial species (Chaverri et al, 1997), including some 10,000 species of superior plants and more than 40,000 inferior and non-vascular plants. Approximately 80% of the mosses and the majority of the 900 species of lichen known in Costa Rica can be found here, as well as 1,000 ferns and 1,000 orchid species (TNC, 2002).

At least 30-40% of plant species (depending on group) are endemic to this area. As to fauna, the Talamanca mountain range harbors more than 400 bird species, including the quetzal *(Pharomachrus mocinno)*, bare-necked umbrellabird (*Cepnalopterus glabricollis),* harpy eagle *(Harpia harpyja)* and bellbird (*Procnias tricarunculata*). Near to 215 mammal species have been registered, including the puma (*Felix concolor*), jaguar *(Pantera onca)*, capuchin monkey *(Cebus capuchinus)* as well as probably the largest population of Baird's tapir *(Tapirus bairdii)* in Central America. Within the park 263 species of amphibians and reptiles have been identified (TNC, 2002). The coastal areas are home to threatened species such as the crocodile *(Crocodylus acutus)*, the cayman *(Caiman crocodilus)* as well as the manatee *(Trichechus manatus)*. Several species of sea turtles nest in the area, namely the leatherback turtle (*Dermochelys coriacea*), loggerhead (*Caretta caretta*), hawksbill (*Eretmochelys imbricata*) and green turtle (*Chelonia mydas*)[5].

The Basin's spectacular biodiversity is the result of two main causes: a strong existing elevation gradient, which varies from 3,820 m.a.s.l. at mount Chirripó to the Caribbean sea level (0 m), as well as being part of the vast biological connection (Talamanca-Central mountain range) communicating the North and South American sub-continents, allowing the movement of biodiversity and genetic exchange of meta-populations (Heckadon, 2001).

[4] Elements for creating the Monitoring Program for PILA conservation targets. Report on the binational workshop of experts from Costa Rica and Panama. TNC, 2004.

[5] ANAI, 2003 and Management Plans of the ASP San San Pond Sak Wetland (ANAM) and Gandoca-Manzanillo Wildlife Refuge (ACLA-C).

STATUS OF SOME SPECIES OF THE SIXAOLA BINATIONAL RIVER BASIN	
THE WORLD CONSERVATION UNION (IUCN)	
FLORA	**STATUS**
Peraman (*Symphonia globulifera*) Zamia (*Zamia skinneri*) *Eschweilera calyculata*	Vulnerable
Heliconia (*Heliconia xanthovillosa*)	Rare
MAMMALS	**STATUS**
Jaguar (*Panthera onca*)	Near Threatened
CITES CONVENTION	
MAMMALS	**STATUS**
Spider monkey (*Ateles geoffroyi*) Mantled howler monkey (*Alouatta palliata*) White-faced capuchin (*Cebus capucinus)* Jaguar *(Panthera onca*) Ocelot (*Leopardus pardalis*) Jaguarundi (*Herpailurus yaguarondi*)	Appendix 1
Collared peccary (*Tayassu tajacu*).	Appendix 2
BIRDS	**STATUS**
Resplendent quetzal (*Pharomachrus mocinno*)	Appendix 1
FLORA	**STATUS**
Orchids: Lady of the Night Orchid (*Brassavola nodosa*),Large-lipped Encyclia (*Encyclia cordigera*), Winged Encyclia (*Encyclia alata),* Night-scented orchid (*Epidendrum nocturnum*), *Epidendrum* sp., Egerton's Trigonidium (*Trigonidium egertonianum*),*Vanilla* sp, *Sobralia* sp; *Catasetum* sp. *Maxillaria* sp., *Pleurothallis* sp., *Scaphyglottis* sp. *Stelis* sp. Ferns: Tree fern (*Alsophila cuspidata*), (*Alsophila erinacea)*	Appendix 2
BIRDS	**STATUS**
Rufous-tailed hummingbird (*Amazilia tzacatl*) GrayCreek Hummingbird (*Glaucis hirsuta*) Eastern long-tailed hermit (*Phaethornis superciliosus*) Band-tailed Barbthroat (*Threnetes ruckeri*) Crane Hawk (*Geranospiza caerulescens*) Laughing Falcon (*Herpetotheres cachinnans*) Mottled Owl (*Ciccaba virgata*) Broad-winged hawk (*Buteo platypterus*) Osprey (*Pandion haliaetus*) Blue-Headed Parrot (*Pionus menstruus*) Olive-throated Parakeet (*Aratinga nana*) Brown-hooded Parrot (*Pionopsitta haematotis*) Red-lored parrot (*Amazona autumnalis*) sulphur-winged parakeet (*Pyrrhura hoffmanni)*, Green Hermit (*Phaethornis guy*) Little Hermit (*Phaethornis longuemareus*) Green-crowned Brilliant (*Heliodoxa jacula*), Swallow-tailed Kite (*Elanoides forficatus*) Double-toothed Kite (*Harpagus bidentatus*) Short-billed pigeon (C*olumba nigrirostris*) White-tipped sicklebill (*Eutoxeres aquila*) Crowned Woodnymph (*Thaluronia colombica)* Green-fronted Lancebill (*Doryfera ludoviciae*) Violet sabrewing (*Campylopterus hemileucurus*) Green Violet-ear (*Colibri thalassinus*) Stripe-tailed Hummingbird (*Eupherusa eximia*) Purple-throated mountain gem hummingbird (*Lampornis calolaema*) Keel-billed toucan (*Ramphastos sulfuratus*).	Appendix 2
AMPHIBIANS	**STATUS**
Strawberry poison dart frog (*Dendrobates pumilio*) Green and black poison dart frog (*Dendrobates auratus*)	Appendix 2

Source: RSDS, 2003

The outstanding richness of biological diversity is reflected in its extensive protected area system. A total of six protected areas can be found in the basin, covering an area of 143,400 hectares (121,400 hectares in Costa Rica and 220,000 hectares in Panama). The protected areas are: (i) *La Amistad International Park* shared between Costa Rica and Panama. The park was created in 1988 and is declared a Biosphere Reserve and World Heritage Site; (ii) *Chirripó National Park*, Costa Rica; (iii) *Hitoy Cerere Biological Reserve*, Costa Rica; (iv) *Gandoca/Manzanillo Wildlife Refuge*, Costa Rica; (v) *San San Pond Sak Wetlands*, Panama. RAMSAR site; (vi) *Palo Seco Protection Forest*, Panama. RAMSAR site. Of those areas previously mentioned, only the PILA (an extensive area of 133,000 hectares) as well as Gandoca Manzanillo and San San Pond Sak are found within the Basin (RSDS, 2003).

The Mesoamerican Biological Corridor is represented in the Basin through the *Talamanca-Caribe* corridor in Costa Rica, and the *Atlántico Panameño* corridor, occupying a total of 101,000 hectares. Both corridors link mountainous, forested areas of the Talamanca-Central mountain range with the Caribbean Sea, and allow interconnection of high-, medium-, and lowland forest with the fluvial plains of the Sixaola River to the coastal Caribbean ecosystems. These corridors allow a flow of fauna and flora and thereby genetic exchange of meta-populations and migration of species.

The Basin contains six indigenous territories, four in Costa Rica (the indigenous reserves Bri Bri de KeköLdi, Talamanca, Cabécar de Talamanca and Telire, totalling an area of 86,700 hectares) and two in Panama (Bri Bri and Naso totaling 26,100 hectares), even though the two latter still lack the legal status of **"comarca or formal indigenous territory in Panamanian territory"**. The indigenous territories contain important extensions of forest, serving as buffer zones to the protected areas, as well as maintaining a function as biological corridors (RSDS, 2003).

WILDLIFE PROTECTED AREAS AND INDIGENOUS TERRITORIES OF THE SIXAOLA BINATIONAL RIVER BASIN

WILDLIFE PROTECTED AREAS (ASP)	Extension (hectares)
Chirripó National Park	12,500
La Amistad International Park (Costa Rican Sector)	115,300
Hitoy Cerere Biological Reserve	1,300
Gandoca-Manzanillo Wildlife Refuge	2,400
La Amistad International Park (Panamanian Sector)	16,800
Palo Seco Protector Forest	800
San San Pond Sak Wetland of International Importance	4,400
SUBTOTAL ASP	**143,400**
INDIGENOUS RESERVES IN COSTA RICAN TERRIORTY	**Extension (hectares)**
Brí Brí de KeköLdi Indigenous Reserve	1,200
Brí Brí de Salamanca Indigenous Reserve	45,400
Cabécar de Salamanca Indigenous Reserve	23,000
Cabécar de Telire Indigenous Reserve	17,200
SUB TOTAL INDIGENOUS RESERVES	**86,700**
TOTAL PROTECTED AREA + INDIGENOUS RESERVES	**230,100**

Source: RSDS, 2003

Environmental Goods and Services

Water resources: The large area of forest covering the Basin (261,704 hectares -88.80%-) is mostly confined to the protected areas and indigenous territories, offering an important *hydro environmental service*, by efficiently controlling runoff and the infiltration processes of the water into the soil and channeling it through the rivers to six hydrographic sub-basins (Yorkin, Uren, Lari, Coén, Telire and Sixaola). Water captured by the forests allows water to be supplied to 33,500 people through streams and springs (upper and middle sub-basins) and subterranean resources (lower sub-basins) (RSDS, 2003).

The forests in the Basin capture an estimated 2,685 mm of precipitation on an annual basis, resulting in an average multiannual flow of 172 m^3/s, representing a volume of 5,456,000 m^3/year. The majority of the water produced in the basin originates from the terrain within Chirripó National Park and La Amistad International Park, making the latter protected area an important reserve of water for the biodiversity as well as the population and economic activities of the basin[6].

The population settled in the basin is supplied by surface waters of streams and springs (upper and middle sub-basins), as well as aquifer resources (lower sub-basin). The security of the supply (quantity of the resource) and its quality depends as much on rain as on forest cover to ensure the production of the water resource.

Parts of the water courses are important means of communication within the interior of the Basin (primarily Indigenous Territories), permitting the transportation of people and merchandise (banana and cacao), in a terrestrial environment where communication by land is complicated, due to the orographic features of the land and the existence of extensive and impenetrable forests. The boats used are small in size (canoes or wooden boats).

While the water quality in the upper sub- basin is generally good, the waters in the middle and lower sub-basins suffer from pollution, mainly from agriculture and human settlements. In the Yorkín and Brai watersheds (in the middle sub-basin), for example, the Biotic Integrity Index[7], which reflects the health of the aquatic ecosystem, has a regular level (3 on a scale of 1-5), indicating that water pollution and sedimentation are affecting the aquatic environment.

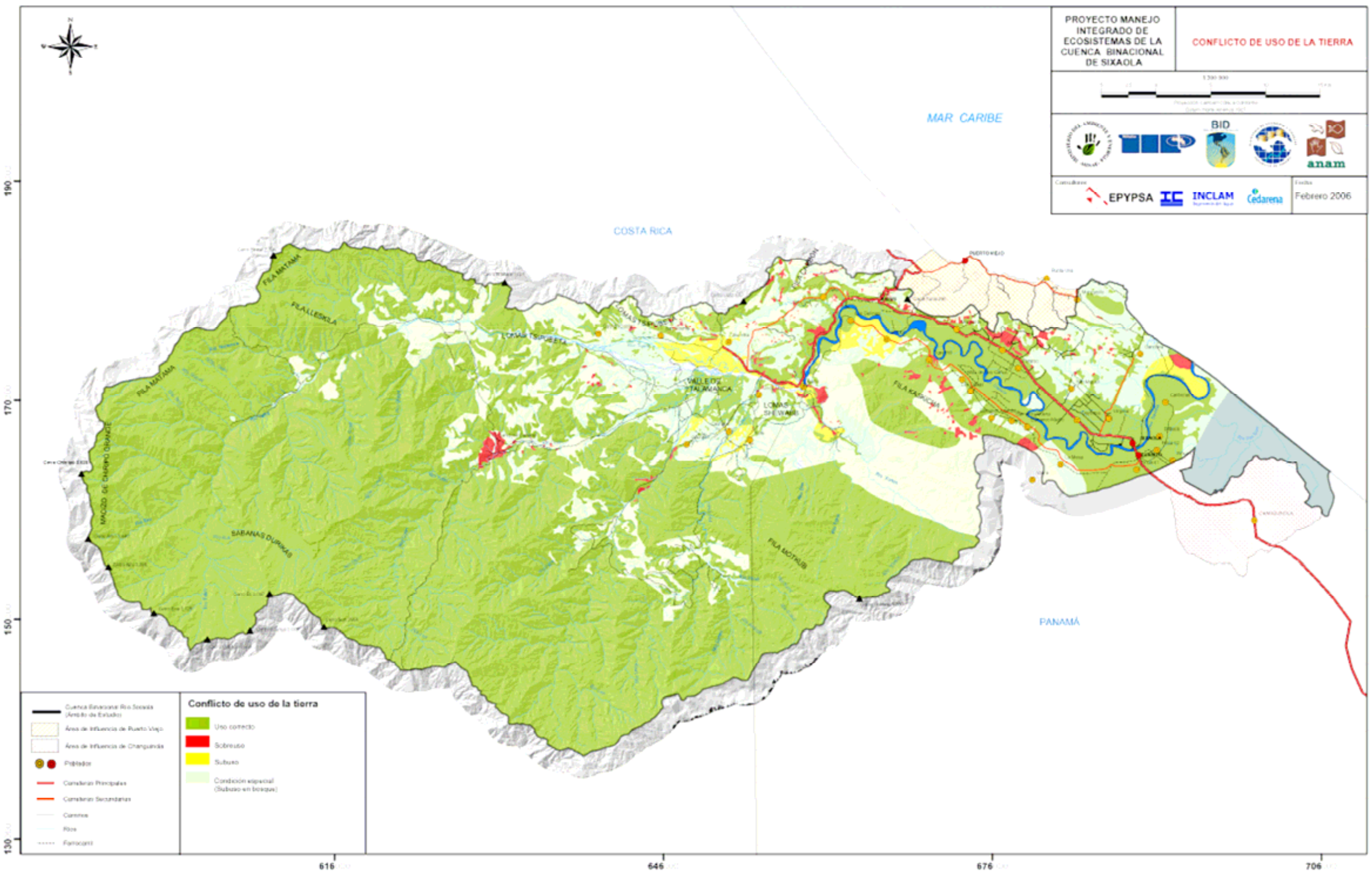
Soil resources: The forest cover protects the fragile soils in the mountainous areas. The soils in this part of the Basin are not appropriate for agriculture due to their limited depth and they are highly vulnerable to soil erosion if the forest cover is removed due to the steep slopes and the continuous rainfall throughout the year. The lands appropriate for agriculture are mainly located in the Talamanca valley (middle sub-basin) inhabited by Bri Bri and Cabécar indigenous populations, which cultivate organic bananas (2,500 hectares), a combination of organic cacao and banana in an agro-forestry system (3,600 hectares), and

[6] Characterization of the Hydrology of the Sixaola Binational River Basin. RSDS, 2003.

[7] This is a bioindicator measured by the local non-governmental organization ANAI, analyzing the presence of certain indicator species that indirectly reflects the quality of the aquatic environment in terms of pollutants and sedimentation. The gradient goes from very poor, poor, regular, good and excellent.

in the lower part of the Basin where extensive commercial banana plantations (12,000 hectares) take advantage of the fertile flood plain.

The process of land degradation is incipient and is localized mainly in the following areas: (i) in the margins of the indigenous territories of Bri Bri and Cabécar (middle sub-basin); (ii) in the Yorkín sub-basin, associated with cattle grazing promoted by Latinos and non-native indigenous inhabitants (Ngöbe-Buglé); (iii) in the Panamanian side of PILA; and (iv) on the hillsides and flood plain in the lower sub-basin. At least 3,350 hectares in these areas are subject to conflicting land use, which contributes to land degradation and soil erosion. In these areas, slash-and-burn practices to prepare for cattle grazing contributes to soil erosion during the heavy rains affecting the area throughout the year (EPYPSA, 2006).


PROYECTO MANEJO INTEGRADO DE ECOSISTEMAS DE LA CUENCA BINACIONAL DE SIXAOLA
CONFLICTO DE USO DE LA TIERRA
MAR CARIBE
COSTA RICA
PANAMÁ
BID
EPYPSA
INCLAM
Febrero 2006
VALLE DE TALAMANCA
Conflicto de uso de la tierra
Uso correcto
Sobreuso
Subuso
Condición especial
(Subuso en bosque)
Área de Influencia de Puerto Viejo
Área de Influencia de Changuinola
Carreteras Principales
Carreteras Secundarias
Caminos
Ríos
Ferrocarril
190
170
150
130
616
646
676
706

Other environmental goods and services

Scenic Beauty: Lately, the *environmental service related to scenic beauty* offered by forests, indigenous agro-forestry systems and their culture[8], coastal ecosystems, as well as the biodiversity they host, is allowing the development of an incipient tourist sector. This is being developed mainly in the lower and middle parts. In the lower sub-basin, tourism is being initiated by ATEC, ASACODE and ACODEFO, emphasizing ANAI's sea turtle conservation Project, which allows 260 eco-tourists a year to visit the Gandoca-Manzanillo wetland and, leave behind an economic benefit of US$ 57,000 (ANAI, 2003). The Tourist Network of Talamanca also operates in the lower and in middle sub-basins[9] and over the last two years (2003-2005) has succeeded in attracting 6,338 tourists. An initiative orientated towards promoting tourism in the indigenous territories exists (Costa Rica-Panama Indigenous Tourism Network); however, at this moment it does not have sufficient demand.

VISITOR REGISTRATION IN THE TALAMANCA TOURIST NETWORK AUGUST 2003-JULY 2005

	August 2003-July 2004	August 2004-July 2005
El Yüe Agro-tourism farm	85	102
Casa Calateas	106	269
Educational Farm	1655	1048
Keköldi	1139	1196
Casacode	135	78
Yorkín	231	294
TOTAL	3351	2987

Source: 2005-2006 Marketing Plan. Talamanca Community Ecotourism Network

In this context, *tourism* could constitute a dynamic sector with the potential of having a significant impact on some communities, but at the moment is not sufficiently developed. However, even though the Basin has unique "attractions" based on its physical-natural and cultural conditions, which have generated important expectations (nature, adventure, ethnic, academic-scientific tourism, etc.), "tourism products" have just barely been developed. Insufficient articulation, difficulties in commercializing and in promoting the product, as well as the scarcity of lodging[10], are some of the factors limiting the consolidation of tourism as a productive alternative in the Basin.

Carbon sequestration: The forests, together with the indigenous agro-forestry systems, have the potential for carbon capture and sequestration (environmental service) of 647,444 tons (2,373.961 tons of CO_2) contributing to the reduction of the effects of climate change (Alpizar, Edwin. 2006).

Natural hazard vulnerability reduction. The forest cover in the Basin also mitigates the effects of natural disasters such as tropical storms and earthquakes, acting as a regulating

[8] The basin contains the largest indigenous population of Costa Rica: 9,348 people.

[9] The Talamanca Community Ecotourism Network is a group that integrates 12 farmer and indigenous community organizations, located from the Carbón River basin to the boarder zone with Panama.

[10] The majority of the lodging is offered in the lower basin, 24, mostly concentrated in the area of Sixaola -5- and Bri Bri -4-, and middle, 11 (RSDS, 2003).

sponge during torrential rains, reducing vulnerability to flash floods, mudslides and landslides. It has the same effect in terms of holding and stabilizing steep slopes and hill land areas during earthquakes.

In the following two sections the main threats and root causes to the degradation of the water, land and biodiversity resources in the Basin are presented. These occur on both sides of the border between the two countries.

B. Threats to land, water and biodiversity resources

Agricultural encroachment, inappropriate subsistence agricultural practices and large-scale commercial crops

Although productive areas in the middle sub-basin are still dominated by sustainable agro-forestry and silvo-pastoral practices, as local population levels and livelihood needs increase, agricultural encroachment is bound to spread throughout the middle sub-basin. Currently, encroachment is particularly heavy in the Yorkín watershed, but can also be observed elsewhere (Piedemontes in the lower sub-basin of Sixaola, area of mount Uatsi, Mirador, among others).

Increasingly, unsustainable practices can be observed, including reduced fallows, slash-and-burn agriculture and agriculture on steep slopes (for example, see pasture techniques described in the following paragraph). Some of the more evident results are nutrient depletion and soil degradation, which are contributing towards declining farm productivity. This is also a primary contributor towards habitat fragmentation, affecting some of the biological corridors in the area.

Additionally, monocultures of banana in the lower sub-basin have affected the agro-biodiversity present in that part of the Basin; due to the massive use of agrochemicals and intensive human intervention, making the presence of fauna associated with musaceas agro-systems notably difficult.

Conversion of land to cattle ranching

In the Basin as a whole, cattle ranching activity is less important compared to the rearing of smaller species (pigs and birds). In spite of this, some sectors of the Basin have suffered from the conversion of forested areas to pasture for cattle. This practice is found mainly in the marginal sectors of the Bri Bri and Cabécar Indigenous Territories (middle sub-basin); in the Yorkín river watershedn, where it is associated with the pasture techniques developed by non-native indigenous (Ngöbe-Buglé) and some Latin populations (ACTEIBRI and ASOGUDABRI, 2006); in the Panamanian sectors of the PILA; and along the inferior mountain slopes of the lower Sixaola basin (RSDS, 2003). In fact, of the approximately 17,000 ha. of the PILA Panama that forms part of the Basin, an estimated 4,000 hectares have been converted to grazing areas.

In the Bri Bri and Cabécar Indigenous Territories of the middle sub-basin, a trend has been observed toward changing pasture lands into banana plantations. However, some

indigenous communities, Cabécar, have used primary forests to establish cattle ranches[11], and in the indigenous area of Bri Bri, most of the cattle ranches are found in the community of Shiroles, some of them having more than 200 head of cattle. In the Costa Rican sector of the lower sub-basin, the communities of Gandoca and San Miguel (150 km^2 of pasture) practice cattle ranching activities at a small scale, while in the Panamanian side, 8,000 head of cattle distributed among 18 farms have been identified. Six thousand of these cattle are distributed among Agroganadera Caribe and Ganaderas Boca, the rest are divided between 16 producers characterized as possessing small ranches (between 5 and 50 animals). In the lower sub-basin, the tendency to substitute the use of cattle for the cultivation of plantain and banana is also observed[12].

The technique used for clearing pastures is the burning of plant cover, which produces soil run-off once the rains begin, and as a result, the release of materials that eventually settle in the rivers. The process of sedimentation in the Yorkín River, a consequence of soil erosion, is causing habitat loss for fish species (ANAI, 2003). The real problem of cattle ranching depends on the form with which it is practiced, since the traditional technique is one hectare per head of cattle, which requires large amounts of land to maintain a relatively small ranch. The importance of this source of pressure on the natural resources is not its area, but its capacity to rapidly degrade soils and the difficulty recovering those soils that have been stripped of forest.

The problem with cattle ranching in the Bri Bri and Cabécares indigenous territories of Costa Rica is not very prominent since the use of cattle is rare, given that it is not a typical economic activity of the indigenous groups, especially among the Bri Bris. On the other hand, on the Panamanian side of the Basin this activity represents a considerable threat to the evergreen tropical broad-leaved montane rainforest, upper montane and sub-montane forests in the areas of Culebra and Nueva Zelandia; the evergreen tropical broad-leaved sub-montane rainforest in the Bajo Colibrí area and the Tscuí River; and the evergreen tropical broad-leaved lowland rainforest of the Boca Chica and Tscuí River areas. Some small scale cattle ranches have also been identified in the Mogli River area. In the Panamanian sector of the PILA, deforested areas that have been converted to agricultural lands and cattle ranches are observed in Monte Azul and in the vicinity of Culebra (RSDS, 2003).

Water pollution due to human and animal wastes, and run-off of agrochemicals

The degradation of the Basin's water resources is a problem of utmost concern and has two main origins: human settlements and intensive agriculture; and a secondary origin, cattle ranching activity. However, the degradation of the water resource is manifested at different intensities in each sector of the Basin (upper, middle and lower), depending on the density of human populations and the type of economic activities practiced within the territory (RSDS, 2.003)

[11] J. Piedrahita. Talamanca faces the second millennium. Strategies for Sustainable Development, 1999.
[12] Cattle ranching Census of 1984 (Costa Rica) and estimations from the Ministry of Cattle Ranching Development of Panama.

Generally speaking, the water quality of the upper sub-basin is good, since the population is sparse (848 people) and the economic activity is of subsistence. However, specific problems regarding the water quality are presented from a combination of the domestic use of water from the rivers and streams, washing clothes (contributes nutrients and chlorine has a toxic effect on aquatic organisms), and the inadequate management of the population's residual waters, which carry contaminates to the water courses and to the potable water source[13], resulting in a high rate of gastrointestinal sickness. The most serious problems of water contamination for human consumption are detected in Alto Telire and Durinak (RSDS, 2003).

Problems in the middle basin increase because it is more densely populated (8,352 people), and there is greater economic activity (mostly agriculture and in lesser amounts, cattle ranching). The inhabitants lack the service of sewer systems, latrines and septic tanks dominate, which require cleaning and isolation, conditions that are not always guaranteed (the same situation occurs in the lower sub-basin). Approximately 53% of the population gets their water from water courses and springs that have problems with water quality, a result of the lack of instruments necessary for territorial planning that allows grouping populated units in location to the water sources, a situation that promotes high incidence of gastrointestinal sickness and intestinal parasites[14].

Water quality has also declined in the middle sub-basin due to the existence of increased cattle ranching activity, mostly in the Yorkín river sub-basin, which results in run-off from animal excrements when it rains and also carries contaminates (nitrates) down towards the fluvial courses. In regards to the contribution of contaminates from agricultural origin, organic agriculture (cacao, plantain) dominates the middle sub-basin and intensive agriculture that uses pesticides is limited, although it has certain implications in the contribution to contamination. In the area corresponding to the upper sub-basin of the Yorkín River and the Panamanian PILA, Ngöbes-Buglés indigenous communities were identified whose sanitary habits are affecting the water quality, since their cultural practices do not follow the use of latrines, but instead defecate directly into water courses, resulting in the contamination of waters that are used for human consumption by the Bri Bri indigenous population inhabiting the middle section of the Yorkín river sub-basin (ACTEIBRI and ASOGUADABRI, 2006).

Water quality problems in the lower sub-basin increase due to the fact that it is the most densely populated area, with the highest number of people (24,300 people), and most economic activity: agriculture, service sector and, in fewer numbers, cattle ranches, located mainly on the Panamanian side. The rural aqueducts that supply water to the population are contaminated by fecal matter[15], and those communities that do have piped water have problems with the lack of or deficiencies in its treatment. An important percentage of the lower basin population lack sewer system service and, occasionally produces the stagnation of residual waters, which give off bad odors and act as mosquito breeding grounds, putting

[13] This problem worsens since 83% of the upper sub-basin population lacks a potable water source through aqueducts, obtaining their water from springs and water courses (RSDS, 2003).
[14] Diagnostic of the Health of the Basin Population, RSDS, 2003. Based on information from EBAIS and the Ministries of Health of Panama and Costa Rica.
[15] Dr. Oscar Bermúdez, Costa Rican Ministry of Health, 2003.

the health of the public at high risk (populations located between Paraíso and Sixaola). In the San San Pond Sak Wetland (RAMSAR) data are reported on contamination of rivers and streams generating health problems for its inhabitants. None of the lower basin settlements possess water treatment systems, so the wastes are released directly into the Sixaola River (RSDS, 2003).

In the lower sub-basin, intensive agriculture is responsible for the majority of the water pollution as well as degradation of coastal wetlands and forest ecosystems bordering the plantations. Massive use of agrochemicals (pesticides and fertilizers) contributes an important volume of contaminants to the binational waters of the Sixaola River and, eventually, to the international waters of the Caribbean Sea. In this regard, both countries face important challenges to be solved, since they appear in the countries with the highest consumption of pesticides per habitant, per hectare. For example, in Panama the average annual consumption is 3 kilograms per each of the country's habitants, which surpasses the world average by almost 6 times[16]. In both countries, the banana sector traditionally appears as one of the main consumers. In Costa Rica it is reported as one of the industries using the most agrochemicals (consuming between 50% and 60% of the country's pesticides) and produces the most cases of intoxication and secondary effects.[17]. On the Panamanian side, banana production in Changuinola reports a rate of pesticide application that reaches 75kg/hectare/year[18].

In the specific case of banana plantations, application of agrochemicals causes them to seep into ground water (which supplies water to a part of the population), as well as run-off through the banana plantation's drainage canals towards the water courses. An important part of pesticide application for pest control is carried out by aerial means, resulting in pesticide dispersion, not only in the soil of the plantations, and in its drainage system, but also in human settlements, protected coastal wetlands and forest formations neighboring the areas of cultivation (RSDS, 2003).

The use of pesticides may be impacting fauna species and the water quality of protected coastal wetlands (Gandoca-Manzanillo and San San Pond Sak –important manatee population-). Pesticide run-off is then transported via the banana plantation's drainage canals to those protected areas (especially to the San San Pond Sak Wetland) by way of small water courses and the strong pumps used to evacuate drainage water from the large plantations, adding those pesticides arriving through aerial spraying. Currently, no integrated studies have been developed for showing the effects that pesticides may be having on fauna and flora, as well as the sanitary repercussions (digestive, respiratory, etc.) on the human population settled in the area where these events occur. The permanent threat of water contamination through pesticides applied by aerial means (small planes), is reinforced by the vulnerability of the local society not having the necessary infrastructure available to protect them. The poor quality of water for human consumption in the lower sub-basin of Sixaola has been recognized, and as the population should collect and

[16] CICLAC, Panama: Diagnosis of Problematic related to the residual content of pesticides in food Panama, May 2000.
[17] National Plan of Environmental Policies ECO 2005, 1996.
[18] CICLAC, May 2000.

manipulate rain water to satisfy their needs, exposing themselves to the residual agrochemicals (RSDS, 2003).

Another big problem that occurs in the water courses of the basin is related to the dumping of plastics used in banana plantations. These plastics are used in mass quantities in the plantations of the lower basin, and with less intensity in the middle basin (Indigenous Territories) (ASOPARAISO and ACOMUITA, 2006). Because of the lack of an adequate system for their collection, storage and transport to the treatment plant, the plastics are thrown into the water courses, being swept away by the rivers (Telire, Sixaola,…) that latter deposit the majority of them along their banks, resulting in an important accumulation of plastics along the length of the Sixaola River comprised between Las Delicias and Las Tablas[19]. The problem with the plastics is not just a mere visual impact, but it is the fact that they are impregnated with agrochemical substances that are washed away by the rain, adding yet more contaminants to the waters. Plastic waste and other agricultural solid waste, end up in the international waters of the Caribbean Sea, contaminating it, and affecting marine ecosystems.

Logging

While deforestation in the Basin in general is not alarming, some zones show a serious increase in unsustainable extraction of timber. In the Gandoca-Manzanillo National Wildlife Refuge, areas affected by illegal extraction of forest resources have been identified, carried out by those social classes with few economic resources in order to supplement their income (Gandoca River and Middle and Mata Limón streams). Other problems identified are the limited efficiency of the Management Plans for managing primary forests, as well as the clearing of paths and paving roads in order to extract wood (which results in the conversion of these roads for public use such as El Paraíso-Puerto Viejo route, Daytona-San Miguel and Gandoca routes) (RSDS, 2003).

In the Bri Bri de KekölDi Indigenous Reserve, paths have been cleared and roads paved, which may encourage future wood extraction (and furtive hunting), especially taking into consideration the comparative advantages offered by being close to the national highway 36 (RSDS, 2003).

In the Palo Seco Protector Forest the extraction of timber-yielding trees and deforestation problems have been reported. These problems are directly related to the migration and colonization phenomena by those inside the interior, whose most visible impact is the deforestation of extensive forested areas in order to create settlements, pastures for cattle, agriculture and wood extraction. Furthermore, it is important to consider the population increase along the entire length of the highway, as well as the construction of housing for settlers, the majority originating from the Chiriquí province, rising the demand for wood (Palo Seco Protector Forest Management Plan, 2003).

[19] State inspection of the banks and waters of the Telire and Sixaola Rivers. January 2006. EPYPSA.

Lastly, timber-yielding trees such as the loquat are illegally extracted in the Panamanian sector of the Yorkín River sub-basin, and then transported to the Costa Rican sector of the basin for later commercialization (CBTC, 2006).

Over fishing and harmful fishing practices

Fishing activities are mainly carried out in the water courses of the Indigenous Territories along the continental range of the Sixaola River Binational Basin, and in lesser amounts, in the rivers and streams of the Wildlife Protected Areas bordering the Indigenous Territories. Fishing is carried out mainly for subsistence and non-commercial nature, and has the objective of acquiring protein by the indigenous populations for the purpose of supplementing their diet. However, according to ACOMUITA (2006), this activity is regarded as unsustainable in two ways: the types of fishing practices used (poison, explosives and non-selective nets) and the quantity of the fisheries resource extracted, provoking excessive fishing effort in relation to the ability of the resource to regenerate.

In the Cabécar Indigenous Reserve of Talamanca, the use of chemical poisons for fishing is reported, resulting in massive fish kills, water contamination and negative impacts on other species of animals not targeted by fishing (RSDS, 2003). In the rivers of the Yorkín sub-basin, Bri Bri Indigenous Territory of Panama, the indigenous populations of the area declare that *"pressure from fishing is very strong and indiscriminate"*, resulting in a scarcity of large fish of all species in the Brai River and upstream waters of Yorkín[20]. In the Palo Seco Protector Forest, fishing with nests is reported, implying non-selective extraction of all sizes of fish, negatively impacting the juvenile populations; and lastly, in the Panamanian part of La Amistad International Park excessive fishing occurs, especially in the Changuinola, Teribe and Tscuí rivers and the streams Boca Chica and Bonyic. The most demanded species are the bobo (*Joturus pichardi*) and mojarras (Archocentrus spp., Astatheros spp y Parachromis spp.), which are some of the conservation targets in this natural area (Panamanian PILA Management Plan, 2003).

Hunting and extraction of flora and fauna.

One of the most important problems detected in the binational Basin is the hunting and illegal taking of pets, which provokes the extraction of some species of animals for human consumption, occasionally for their commercialization, and on other occasions yield to the population's fear of certain mammals (RSDS, 2003). The hunting and extraction of pets can be negatively compromising the actual populations of those species most endangered. In neither of the two countries, Costa Rica or Panama, exist any systematic and continuous official studies known that determine if the rate of extraction of individuals is attuned to the rate of recruitment of the animal populations[21], although on the Panamanian side, there are

[20] O. Mclarney, William, Barquero Elizondo, Julio and Mafla Herrera Maribel (June 2003): Biomonitoring in the Yorkín River Basin. Bri Bri Indigenous Territory of Panama/Costa Rica. Report presented to the Asociación Unión Guabo-Cable Bri Bri de Panamá (ASOGUADABRI-PA). Biomonitoring Project of Talamanca/Valle de la Estrella, ANAI-CORREDOR BIOLÓGICO TALAMANCA-CARIBE (CBTC)

[21] Illegal Hunting. Pages 22-23 of the Guide for Conservation Actions in the Binational La Amistad Site. Series: Supporting management and protection efforts of the tropical biodiversity nº 1. The Nature Conservancy, 2006.

indications that certain species of fauna have disappeared as a result of the hunting pressures.

In the Costa Rican sector of the binational Basin, hunting practices are mainly carried out by indigenous communities, with the purpose of supplementing their diet, both in the areas within their Reserves as well as in the protected areas of La Amistad International Park and Hitoy Cerere Biological Reserve. The problem is aggravated by the fact that in these two protected areas hunting has also been reported for the commercialization of wild animal meat and to supplement their income. In the case of the Bri Bri de KekölDi Indigenous Reserve and the Gandoca-Manzanillo Wildlife Refuge, hunting has been observed in most part by neighbors (RSDS, 2003).

In the Panamanian sector, hunting of wild animals has been confirmed in the San San Pond Sak Wetland as well as the hunting of sea turtles to sell their meat and harvesting their eggs[22], while in the Palo Seco Protector Forest, illegal hunting has been observed by using dogs[23].

In the Naso Indigenous Reserve, the decline of some wildlife populations has been reported as a result of fragmented habitats, as well as by the pressure exerted by clandestine hunters and by the same indigenous populations. The animals taken from the forest are usually small sized mammals, such as armadillos, agoutis, rabbits and, in fewer quantities, birds. Species subjected to hunting in this area include; tapirs, collared peccaries, wild boars, red brocket deer, white-tailed deer, spider monkeys, jaguars, howler monkeys, agoutis, armadillos, rabbits and jackrabbits. In communities like Sieyik y Siekin, these species are no longer observed, but they were present in the area.

SOME SPECIES OF ANIMALS CONSUMED IN THE COMUNITIES AND HUMAN ESTABLISHMENTS OF PALO SECO PROTECTOR FOREST	
Common name	**Scientific name**
Red-tailed Squirrel	*Sciurus granatensis*
Nine-banded Armadillo	*Dasypus novemcinctus*
Paca	*Agouti paca*
Kinkajou, Honeybears	*Potos flavus*
White-nosed Coati	*Nasua narica*
Panther cat, Ocelot	*Felis pardalis*
White-faced capuchin	*Cebus capucinus*
Spider monkey	*Ateles geoffroyi*
Mantled howler monkey	*Alouatta palliata*
Hoffman's Sloth	*Choloepus hoffmani*
Agouti	*Dasyprocta punctata*
White-lipped peccary	*Tayassu pecari*
Spiny rat	*Proechymis semispinosus*

[22] In the San San Pond Sak Wetland the Association Friends and Neighbors of the Coast and Nature (AAMVECONA) are present, working in coordination with the national Environmental Authority of Panama (ANAM); one of their objectives is to decrease the poaching and killing of leatherback turtles.
[23] Management Plans of the San San Pond Sak Wetland and Palo Seco Protector Forest, 2003.

SOME SPECIES OF ANIMALS CONSUMED IN THE COMUNITIES AND HUMAN ESTABLISHMENTS OF PALO SECO PROTECTOR FOREST	
Common name	**Scientific name**
Collared peccary	*Tayassu tajacu*
Margay	*Felis wiedii*
White-tailed deer	*Odocoileus virginianus*
Red brocket deer	*Mazama americana*
Crimson-crested Woodpecker	*Campephilus melanoleucos*
Blue-Headed Pionus	*Pionus menstruus*
Red-lored parrot	*Amazona autumnales*
Mealy parrot	*Amazona farinose*
Belted Kingfisher	*Ceryle alcyon*
Gray-headed Chachalaca	*Ortalis cinereiceps*
White-tipped Dove	*Leptotila verreauxi*
Crested guan	*Penelope purpurascens*
Great Curassow	*Crax rubra*
Ruddy Quail-Dove	*Geotrygon* sp.
Breeding parrots	*Aratinga*
Collared aracari	*Pteroglossus torquatus*
Keel-billed toucan	*Ramphastos sulfuratus*
Green iguana	*Iguana iguana*
Common slider	*Trachemys scripta*

Source: Adapted from ANCON-CEPSA, 2003.

As for the jaguar (*Panthera onca*) the inhabitants of Palo Seco Protector Forest say that it is hunted out of fear. This feline is believed to represent a threat to the people and, therefore, jaguar in the forested areas tends to be hunted. When this happens, the skin of the animal is removed and sold. This has been reported in the area of Teribe (Palo Seco Protector Forest Management Plan, 2003).

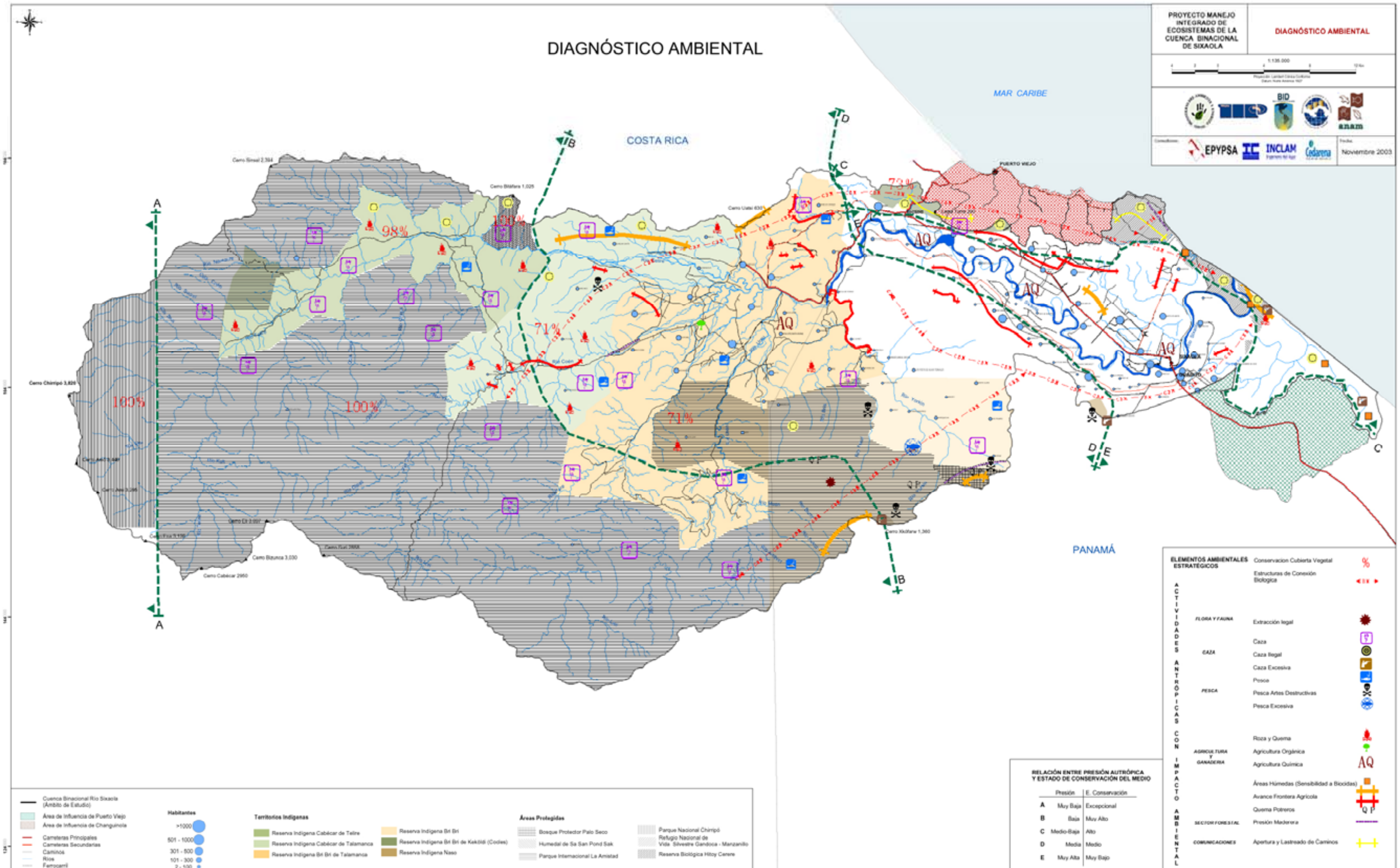
In the Panamanian part of the La Amistad International Park data indicate excessive hunting on species such as the tapir (*Tapirus bairdii*), jaguar (*Panthera onca*) and other species important given their commercial value. These species are the paca (*Agouti paca*), deer (*Mazama americana*), peccary (*Tayassu tajacu*), agouti (*Dasyprocta punctata*). Besides, some species of large birds such as the black guan (*Chamaepetes unicolor*), great tinamou (*Tinamus major*), little tinamou (*Crypturellus soui*), highland tinamou (*Notharcus bonapartei*), grey-headed chachalaca (*Ortalis cinereiceps*) and the great curassow (*Crax rubra*) are also hunted. These species are protected under Panamanian wildlife laws due to the decline in populations experienced over the past few years, mainly owing to habitat destruction and clandestine hunting (PILA Management Plan-Panama, 2003).

FAUNA SPECIES THAT HISTORICALLY HAVE BEEN OBSERVED IN THE AREAS ADJACENT TO THE PANAMANIAN PILA, BUT ARE LONGER PRESENT [24]	
Common name	**Scientific name**
Mantled howler monkey	*Alouatta palliata*
Giant anteater	*Myrmecophaga tridáctila*
White-tailed deer	*Odocoileus virginianus*
Harpy eagle	*Harpia harpya*
Grey-headed chachalaca	*Ortalis cinereiceps*
Great Curassow	*Crax rubra*
Yellow crowned parrot	*Amazona ochrocephala*
Red macaw	*Ara chloroptera*
Green macaw	*Ara a. ambigua*

Source: Adapted from ANCON-CEPSA, 2003.

In the Panamanian side of the La Amistad International Park, data are reports of considerable extractions of tree ferns and orchids for their commercialization, which has caused a reduction in these species within the protected area. This situation is also reported on the Costa Rican side, as well as in other natural areas of the binational basin (RSDS, 2003).

[24] According to the inhabitants of the Naso Teribe Indigenous Territory and other surrounding communities (Panamanian sector of the basin), the species indicated in the table are no longer present within their territory.


DIAGNÓSTICO AMBIENTAL
PROYECTO MANEJO INTEGRADO DE ECOSISTEMAS DE LA CUENCA BINACIONAL DE SIXAOLA
DIAGNÓSTICO AMBIENTAL
COSTA RICA
MAR CARIBE
PANAMÁ
EPYPSA
INCLAM
Noviembre 2003
AQ
100%
98%
71%

C. Main root causes

The main root causes contributing to the loss of biodiversity, the degradation of land resources and the deterioration of the binational water body, include:

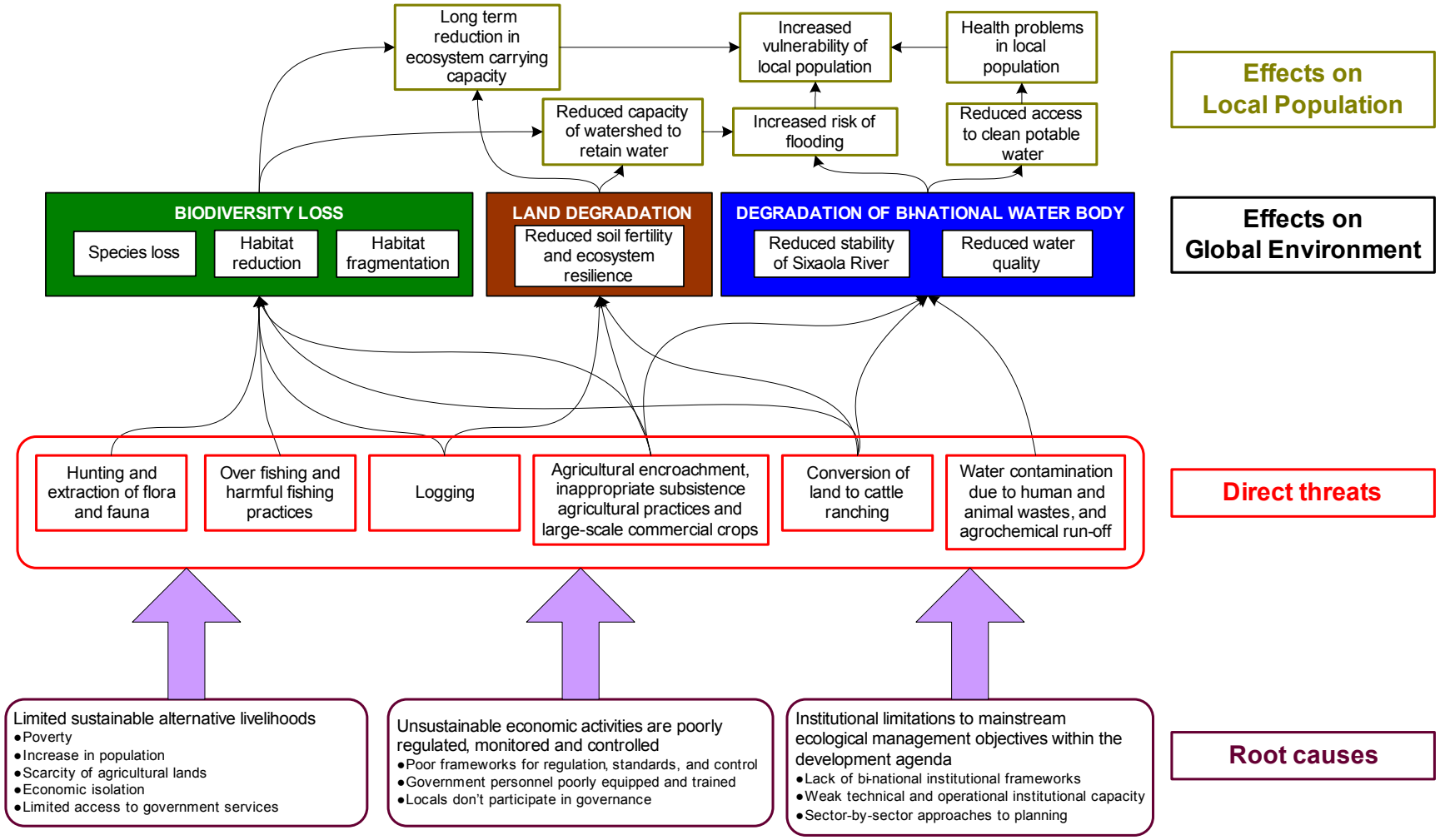
Limited sustainable alternative livelihoods. Poverty is widespread throughout the Basin, but particularly rampant in the upper and middle parts, where the economic activities currently practiced by the human population are largely limited to an intensification of agricultural practices and the illegal extraction of flora and fauna in response to both protein needs and economic driving forces. The problem is compounded because the poor, often the indigenous communities, tend to have limited access to government services, including support to enhance productivity and commercialization, as well as credit support. This constitutes a key problem in those areas, because it correlates to a propensity against technological innovation. While commercial production is increasing in the lower sub-basin, the remaining areas remain very isolated in terms of sustainable livelihood alternatives. The consumption needs of the increasing population must therefore be absorbed by a limited pool of natural resources, leading to overexploitation.

Unsustainable economic activities are poorly regulated, monitored and controlled. Unsustainable activities such as illegal logging, intensive agriculture (agro-chemical intensive), destructive fishing applying dynamite and poison and extensive cattle grazing are taking place in a context of a weak and unharmonized (between the two countries and between sectors) regulatory, standards and control frameworks, including limited opportunities for co-management and local involvement. Furthermore, there is an insufficient presence of adequately trained and equipped personell[25] with responsibility for monitoring and controlling such activities. This situation is further aggravated by the fact that local inhabitants and producers seem to remain largely unaware of the advantages of conserving and sustainably managing native flora and fauna and agro-biodiversity, and of the existing natural resources protection laws and regulations.

Institutional limitations to mainstream ecological management objectives within the development agenda. Despite recent efforts to develop the RSDS, there is an apparent lack of functional binational institutional frameworks, as well as incipient technical and operational capacities[26] of the involved local and regional authorities (including the indigenous ones), as well as civil society organizations, to effectively apply integrated management and planning practices in a coordinated and participatory manner.

[25] This includes personnel from public institutions at the regional and local level, as well as indigenous communities and civil society organizations.

[26] This includes, among others, the need for a basinwide information system and coordination mechanisms.


Long term reduction in ecosystem carrying capacity
Increased vulnerability of local population
Health problems in local population
Reduced capacity of watershed to retain water
Increased risk of flooding
Reduced access to clean potable water
Effects on Local Population
BIODIVERSITY LOSS
Species loss
Habitat reduction
Habitat fragmentation
LAND DEGRADATION
Reduced soil fertility and ecosystem resilience
DEGRADATION OF BI-NATIONAL WATER BODY
Reduced stability of Sixaola River
Reduced water quality
Effects on Global Environment
Hunting and extraction of flora and fauna
Over fishing and harmful fishing practices
Logging
Agricultural encroachment, inappropriate subsistence agricultural practices and large-scale commercial crops
Conversion of land to cattle ranching
Water contamination due to human and animal wastes, and agrochemical run-off
Direct threats
Limited sustainable alternative livelihoods
●Poverty
●Increase in population
●Scarcity of agricultural lands
●Economic isolation
●Limited access to government services
Unsustainable economic activities are poorly regulated, monitored and controlled
●Poor frameworks for regulation, standards, and control
●Government personnel poorly equipped and trained
●Locals don't participate in governance
Institutional limitations to mainstream ecological management objectives within the development agenda
●Lack of bi-national institutional frameworks
●Weak technical and operational institutional capacity
●Sector-by-sector approaches to planning
Root causes

Appendix H:
Stakeholder participation summary and plan (In Spanish)

APENDICE H: PROCESO DE CONSULTA E INVOLUCRAMIENTO DE LOS ACTORES INTERESADOS

A. Antecedentes: Estrategia Regional de Desarrollo Sostenible de la Cuenca del Río Sixaola

El proceso de formulación del proyecto "Manejo Integrado de Ecosistemas de la Cuenca Binacional del Río Sixaola" forma parte de un proceso más amplio iniciado en el 2003, promovido por los Gobiernos de Costa Rica y Panamá, con el apoyo del Banco Interamericano de Desarrollo (BID), mediante el cual se elaboró la Estrategia Regional de Desarrollo Sostenible de la Cuenca Binacional del Río Sixaola (ERDS).

Este se caracterizó por ser un proceso altamente participativo, en el cual intervinieron instituciones sectoriales nacionales y con presencia en la cuenca, instituciones regionales, Gobiernos Locales, Gobiernos Indígenas, así como diversos sectores, tales como el productivo, ambientalista, indígena, organizaciones comunitarias de base, organizaciones de mujeres, entre otros. La formulación de una visión de desarrollo sostenible conjunta para esta región, caracterizada por ser una de las más pobres, vulnerables y más rezagadas dentro de los dos países, demandó un trabajo intenso que se materializó en varias reuniones, tanto en el nivel central con funcionarios de alto nivel (Ministros de Economía, Planificación, Ambiente, Obras Públicas) y técnicos, como en el nivel local.

Los encuentros en el nivel local se materializaron en talleres nacionales y binacionales que contaron con la participación de más de 300 personas, así como en diversas reuniones específicas y bilaterales.

La ERDS culminó con el apoyo favorable de todos los actores, y con el compromiso de gestionar fondos que permitan su implementación. Dentro de este contexto, ambos gobiernos solicitan al BID la realización de dos programas de nivel nacional: Programas de Desarrollo Sostenible de Bocas del Toro (Panamá), y Programa de Desarrollo Sostenible de Sixaola (Costa Rica). Estos programas integrales impulsarán diversas acciones en los territorios de cada país, sin embargo, fue notorio que para el abordaje de varios de los problemas ambientales, era necesario la realización de un proyecto binacional, para lo cual se tomó la decisión de formular un proyecto GEF.

B. Proceso de Consulta Efectuado durante la preparación del PDF-B "Manejo Integrado de Ecosistemas en la Cuenca Binacional del Río Sixaola"

El proceso de consulta y participación iniciado en 2003 con la ERDS ha servido de base y se ha profundizado durante el proceso de formulación del proyecto "Manejo Integrado de Ecosistemas en la Cuenca Binacional del Río Sixaola". El mismo se realizó con la participación de los Ministerios de Ambiente y de Planificación de Costa Rica (MINAE-MIDEPLAN) y del Ministerio de Economía y Finanzas (MEF) y la Autoridad Nacional Ambiental (ANAM) de Panamá.

Se definió una estrategia de participación basada en la experiencia generada con la formulación de la ERDS, en donde se identificó como herramienta más estratégica la comunicación directa con los actores materializada en reuniones específicas y talleres. Varias de las reuniones se realizaron en los propios espacios de estos actores, entendidos como los territorios indígenas, las oficinas de las asociaciones de productores y de base, el salón comunal de la comunidad, y los restaurantes de los poblados de la cuenca. Durante las mismas, los consultores trabajaron con líderes locales que cumplieron un papel de promotores sociales, facilitando así la comunicación y el diálogo. Entre las principales reuniones que se llevaron a cabo en el espacio territorial de la cuenca, se encuentran las realizadas con los actores e instituciones de ambos países, dentro de las cuales destacan:

Sector Indígena

⇒ ADITIBRI: Asociación de Desarrollo Integral de la Reserva Indígena Talamanca Bribri
⇒ ADITICA: Asociación de Desarrollo Integral de la Reserva Indígena Talamanca Cabécar
⇒ ACTEIBRI: Asociación Conservacionista del Territorio Indígena Bri Bri de Panamá
⇒ IRIRIA: Asociación Iriria
⇒ ASOGUADABRI Asociación Unión Guabo – Dacle Bribri Panamá
⇒ RED INDÍGENA DE TURISMO COSTA RICA-PANAMÁ
⇒ COMUNIDAD INDÍGENA SHUAAB,

Sector Productivo

⇒ APTA Asociación de Pequeños Productores de Talamanca
⇒ ASOPARAISO Asociación de Pequeños Productores de Baja Talamanca
⇒ APRODEF Asociación de Productores de Desarrollo Fronterizo
⇒ COCABO Cooperativa de Cacao de Servicios Múltiples

Sector Ambiental

⇒ AAMVECONA: Asociación de Amigos y Vecinos de la Costa y la Naturaleza
⇒ CBTC: Corredor Biológico Talamanca Caribe
⇒ ASACODE: Asociación Sanmigueleña de Conservación y Desarrollo
⇒ Comité Zonal del Refugio de Vida Silvestre Gandoca-Manzanillo
⇒ COORDINADORA DE SINAPROC EN COMUNIDAD LAS DELICIAS

Organizaciones de Mujeres

⇒ Asociación Damas Rurales de Las Tablas hasta Las Delicias.
⇒ ACOMUITA: Asociación Comisión Mujeres Indígenas Bribris de Talamanca

Institucional

⇒ ACLAC-C: Área de Conservación La Amistad Caribe
⇒ ANAM-regional: Autoridad Nacional del Ambiente

⇒ MIDA: Ministerio de Desarrollo Agropecuario

Estas reuniones fueron complementadas con reuniones en San José y ciudad de Panamá en donde se establecieron contactos con representantes de estos mismos sectores, pero que tienen presencia también en el nivel central, así como representantes de diversas instituciones. Entre las principales reuniones que se realizaron en las reuniones en San José se encuentran:

Sector Indígena:

ACICAFOC: Asociación Coordinadora Indígena Campesina de Agroforestería Comunitaria

Sector Ambiental:

TNC: Tha Nature Conservancy
CI: Conservation Internacional

Instituciones

MEF: Ministerio de Economía y Finanzas
MIDEPLAN: Ministerio de Planificación
MINAE: Ministerio de Ambiente y Energía
FONAFIFO: Fondo de Financiamiento Forestal
ANAM; Autoridad Nacional Ambiental
IDAAN: Instituto de Acueductos y Alcantarillados Nacionales
Ministerio de Salud Panamá

Estas reuniones se complementaron con 3 talleres binacionales, que contaron con la participación de más 120 representantes de instituciones y organizaciones claves. El primero de ellos sirvió para revisar el marco lógico y efectuar el análisis de problemas; el segundo fue un taller dedicado en exclusiva a la discusión de propuestas concretas para las Áreas Silvestres Protegidas y biodiversidad; y, el tercero fue un taller de revisión y consulta de la propuesta de intervención. Otro aspecto que vale la pena rescatar, es la elaboración de un documento de actualización de "Agentes Sociales y sus Agendas", mediante el cual se identificó las relaciones entre los actores, sus intereses, y sus conflictos actuales y potenciales, sobre todo los relacionados con el manejo de recursos naturales. A continuación se presenta un resumen de los principales encuentros.

1. Primer Taller Binacional. Bri Bri y Punta Cocles (Costa Rica), 18 y 19 de enero de 2006

El primero de los talleres binacionales se desarrolló del 18 al 19 de enero de 2006 en la región del Caribe de Costa Rica (Bribri y Punta Cocles). A él acudieron 69 representantes de instituciones de nivel nacional, regional, así como actores de la sociedad civil de ambos países. En la siguiente tabla se presenta la lista de participantes.

LISTADO DE PARTICIPANTES EN EL PRIMER TALLER BINACIONAL (18-19/01/2006)	
NOMBRE Y APELLIDOS	**INSTITUCIÓN A LA QUE REPRESENTAN**
Israel Barrera	Ministerio de Economía y Finanzas de Panamá (MEF)
Georgina Osorio	Ministerio de Economía y Finanzas de Panamá (MEF)
Darysbeth Martinez (Cambio Climático)	Autoridad Nacional Ambiental de Panamá (ANAM-Central)
Carlos Melgarejo (Forestal)	Autoridad Nacional Ambiental de Panamá (ANAM-Central)
Roberto Galán (Hidrico)	Autoridad Nacional Ambiental de Panamá (ANAM-Central)
Ingeniero Musaquites	Autoridad Nacional Ambiental de Panamá (ANAM-Changuinola)
Valentín Pineda	Autoridad Nacional Ambiental de Panamá (ANAM-Changuinola)
Lionel Quiroz	Autorizad Nacional Ambiental de Panamá-PILA
José Armando Díaz	Instituto de Acueductos y Alcantarillados (IDAAN) Bocas del Toro
Gladicin Serrano	Ministerio de Desarrollo Agropecuariio (MIDA)- Bocas del Toro
Sebastián Castillo	Sistema Nacional de Protección Civil (SINAPROC)
Dr. Hermes Bustamante	Ministerio de Salud de Panamá (MINSA)
Jorge Romero	Programa de Desarrollo Sostenible de Bocas del Toro
Virginia Abrego	Municipalidad de Changuinola
Mario Abrego	H.R Corregimiento Las Tablas
Antonio Wedemburg	Corregimiento Guabito
Eldis Barnes	Universidad de Panamá-Regional de Changuinola
Eustaquio Arauz	Asociación de Amigos y Vecinos de la Costa y la Naturaleza (AAMVECONA). Humedal de San Sand Pond Sack
Sergio Salinas Rigoberto Lopez	Asociación Protectora Las Delicias
Norman Woods	Cooperativa de Cacao Bocatoreña (COCABO)
Vicente Romero	Asociación Conservacionista del Territorio Indígena Bri Bri de Panamá (ACTEIBRI)
Luís Fallas	Ministerio de Planificación Económica de Costa Rica (MIDEPLAN)
Yalili Céspedes	Ministerio de Planificación Económica de Costa Rica (MIDEPLAN)
Sharon Jones	JAPDEVA
Gilbert Rodríguez	Ministerio de Planificación Económica de Costa Rica (MIDEPLAN)
Gabriela Mora	Sistema Nacional de Áreas de Conservación (SINAC) / MINAE / Costa Rica
Lesbia Sevilla	Sistema Nacional de Áreas de Conservación (SINAC) / MINAE / Costa Rica
Jenny Ash	Sistema Nacional de Áreas de Conservación (SINAC) / MINAE / Costa Rica
Edwin Cyrus	Área de Conservación La Amistad-Caribe (ACLA-C) del Sistema Nacional de Áreas de Conservación (SINAC) del Ministerio de Ambiente y Energía (MINAE) de Costa Rica
Marcelo Pacheco	Área de Conservación La Amistad-Caribe (ACLA-C) del Sistema Nacional de Áreas de Conservación (SINAC) del Ministerio de Ambiente y Energía (MINAE) de Costa Rica
Olman Morales	Área de Conservación La Amistad-Caribe (ACLA-C) del Sistema Nacional de Áreas de Conservación (SINAC) del Ministerio de Ambiente y Energía (MINAE) de Costa Rica
Marco Vinicio Araya	Sistema Nacional de Áreas de Conservación (SINAC) del Ministerio de Ambiente y Energía (MINAE) de Costa Rica
Ramón Araya	Comisión Nacional de Emergencias de Costa Rica (CNE)
Dr.Rodrigo Marín	Ministerio Salud Regional de Costa Rica
Lloyd Foster	Ministerio de Agricultura de Costa Rica (Guápiles)
Alberto Garcia en su lugar	Fondo Nacional de Financiamiento Forestal (FONAFIFO)
Luís Sánchez y Nelson	Sistema Nacional de Áreas de Conservación (SINAC)- PILA
Rugeli Morales	Municipalidad de Talamanca
Felipe Carazo	The Nature Conservancy (TNC)
Manuel Ramírez	Conservación Internacional (CI)
Julio Barquero	PROARCA
Rosa Bustillos	Corredor Biológico Talamanca-Caribe (CBTC)
Emily Yozell	ADECOMAGA
Benson Venegas	ANAI
Walter Rodríguez	Asociación de Pequeños Productores de Talamanca (APPTA)
Guillermo Rodríguez	Asociación de Desarrollo Integral del Territorio Indígena Bri Bri de Talamanca (ADITIBRI)
Faustina Torres o Marina Lopez	Asociación Comisión de Mujeres Indígenas Bribris de Talamanca (ACOMUITA)
Francisco Morales	Asociación de Desarrollo Integral del Territorio Indígena Cabécar de Talamanca

LISTADO DE PARTICIPANTES EN EL PRIMER TALLER BINACIONAL (18-19/01/2006)	
NOMBRE Y APELLIDOS	**INSTITUCIÓN A LA QUE REPRESENTAN**
	(ADITICA)
Levi Sucre	Asociación Coordinadora Indígena Campesina de Agroforestería Comunitaria (ACICAFOC)
Gabriel Jacome	STRI
Henrik Franklin	BID Washigton
Luis Hernando Hintze	BID Costa Rica
Hilario Villalvilla	EPYPSA/INCLAM/CEDARENA
Andrea Meza	EPYPSA/INCLAM/CEDARENA
Raúl Gallardo	EPYPSA/INCLAM/CEDARENA
Luís Fernando Sage	EPYPSA/INCLAM/CEDARENA
Carlos Borge	EPYPSA/INCLAM/CEDARENA
Delroy Barton	EPYPSA/INCLAM/CEDARENA
Leif Pedersen	EPYPSA/INCLAM/CEDARENA
Johny Cuevas	EPYPSA/INCLAM/CEDARENA
José Agustin Espino	EPYPSA/INCLAM/CEDARENA
Ramón Alvarado	EPYPSA/INCLAM/CEDARENA
Jessica Jones	EPYPSA/INCLAM/CEDARENA
Luis Azcarate	EPYPSA/INCLAM/CEDARENA
Edwin Alpizar	EPYPSA/INCLAM/CEDARENA
Rolando Castro	EPYPSA/INCLAM/CEDARENA

El taller tuvo como objetivo presentar el Concepto de Proyecto GEF (lanzamiento) a las instituciones y organizaciones de la sociedad civil, e iniciar el diálogo para la preparación del esquema de intervención del proyecto. Previo a la realización del taller se aclaró el alcance y las características de un proyecto GEF. Esto era fundamental ya que algunos de los actores consideraban una intervención de corte más de desarrollo rural, y no tanto ambiental. De aquí, que como objetivos del proyecto se establecieron los siguientes:

(i) esclarecer conjuntamente los alcances del Proyecto GEF de línea operacional OP-12;
(ii) identificar, desde la óptica del proyecto GEF, los principales problemas ambientales de la cuenca binacional del río Sixaola;
(iii) discutir y valorar los componentes del proyecto (primer acercamiento para elaboración de marco lógico del proyecto);
(iv) plantear esquema de ejecución del proyecto

La metodología del taller se estructuró de la siguiente manera, una primer parte (efectuada el día 18) en donde se realizaron presentaciones en plenaria con una respectiva sesión de preguntas, y la cual fue complementada con con mesas de trabajo; y una segunda parte (sesión del día 19), en donde se trabajó en plenaria con un grupo más reducido de participantes.

Las presentaciones en plenaria versaron sobre 3 ejes principales: (1) presentación de antecedentes del proceso en relación con la Estrategia de Desarrollo Sostenible, (2) presentación del diagnóstico ambiental de la cuenca, y (3) presentación explicativa de lo que son los proyectos GEF, y sobre todo lo que son los proyectos que se enmarcan en el Programa Operacional 12 (OP 12). Esto fue altamente productivo porque permitió que los actores expresaran lo que consideran

son los principales problemas ambientales que se viven en la cuenca, pero sobre todo permitió que los participantes discutieran y aclararan sus dudas con respecto a las posibles áreas que un proyecto OP12 puede financiar.

Posteriormente se establecieron tres mesas de trabajo para analizar los principales problemas, las causas raíz, y los efectos mas importantes en términos de degradación ambiental, de los que comenzaron a perfilarse como los ejes aglutinadores a ser trabajados como componentes del proyecto: biodiversidad, degradación de suelos, y contaminación de las aguas (aguas internacionales).

En la mesa se concluyó que en general la cuenca tiene un grado aceptable de cobertura de boscosa, pero que sin embargo se están presentando procesos localizados de cambio de uso de suelo (subcuenca del río Yorkín –potrerización) o prácticas agrícolas no sostenibles (como siembra de cultivos no permanentes en las márgenes de los ríos) que efectivamente están contribuyendo a degradar el suelo. Igualmente fue intensa la discusión en relación con el tema del uso de agroquímicos, y las causas y efectos en las utilización de estos productos. En esta mesa hubo una importante discusión acerca de la pobreza como causa o consecuencia del problema ambiental, y la estrecha relación que ésta tiene con el actual modelo productivo de la cuenca baja (modelo agroindustrial-exportador basado en el monocultivo de musáceas), en donde existe concentración de la tenencia de la tierra en pocos grandes propietarios (fincas bananeras de trasnacionales y fincas de costarricenses y panameños). Si bien no se logró a llegar a un acuerdo acerca de si es posible transformar completamente ese modelo, al menos se llegó a la conclusión de la importancia de trabajar en fomentar la adopción de prácticas productivas como las que se desarrollan en la cuenca media, y de mejorar los controles sobre las fincas bananeras.

Con los participantes se llegó a la conclusión de la importancia en definir un grupo más reducido para el trabajo posterior, de forma tal que los próximos talleres antes de contar con una propuesta totalmente articulada, pudieran ser más operativos. Así el taller del 19 se realizó con un grupo de 30 personas. En este segundo día, se abordaron dos temas: revisión y validación de los componentes del proyecto, lo cual se convirtió en el primer acercamiento para la elaboración del marco lógico, y en la discusión inicial (definición de principios) para el establecimiento de una propuesta de ejecución.

En relación con el primer punto, se discutió nuevamente la pertinencia o no de establecer como uno de los componentes del proyecto el tema del cambio climático. Para muchos, la alta existencia de una masa boscosa importante dentro de la cuenca es una contribución al cambio climático, por cuanto se están evitando emisiones. En torno a este punto fue necesario aclarar los aspectos que el GEF financia relacionados con el cambio climático. Por una parte se aclaró las limitaciones del tema bosques-conservación vistos desde una perspectiva del cambio climático y se aclaró que otro sería el escenario si se estuviera planteando la reforestación. Por otra parte se dejó aclaró que al GEF le interesa apoyar sobre todo proyectos que claramente contribuyan a disminuir emisiones de gases de efecto invernadero (por ejemplo energías limpias), y que realmente, por el bajo nivel de desarrollo dentro de la cuenca, este no es un espacio en donde se estén desarrollando actividades con notables emisiones de estos gases. Luego de profundizar en otros ámbitos de la realidad de la cuenca, se llegó al consenso de que el proyecto debe abordar los diferentes espacios territoriales de la cuenca (alta, media, baja) respetando las distintas

particularidades presentes en cada uno de esos ámbitos. Dentro de este contexto, se avaló que el proyecto, la ser integral (OP 12) debía abordar las siguientes áreas focales GEF :

⇒ biodiversidad: entendida en un enfoque amplio de inclusión de la población en el cuidado y manejo de ésta, y no limitada a las áreas protegidas
⇒ aguas internacionales: el problema principal de la cuenca. Este recurso es uno de los más afectados por el escurrimiento de agroquímicos, los vertidos orgánicos, y el crecimiento desordenado de la población y las actividades comerciales (daño a nacientes, uso de aguas subterráneas sin control)
⇒ degradación de suelos: en cuanto a la degradación de la calidad del mismo, y su pérdida (erosión y sedimentación), procesos que por las características de la cuenca, pueden transformase en casi-irreversibles si llegan a suceder. De aquí la importancia de trabajar en evitar y controlar los focos de problemas que comienzan a verse especialmente en algunos sectores de la cuenca media.

Con base en los anteriores aspectos, los participantes coincidieron en que el proyecto debía estructurarse en tres componentes:

⇒ Fortalecimiento del marco legal e institucional binacional para el manejo integrado de la cuenca: aspecto fundamental debe ser la creación de capacidades de actores claves, y la facilitación de su participación en esta gestión.
⇒ Promoción de modelos productivos compatibles con el uso y conservación del suelo y agua
⇒ Uso sostenible de la biodiversidad: respetando el enfoque anteriormente expuesto

En cuanto al segundo punto, estructura de ejecución, los representantes del sector indígena y de la sociedad civil, fueron enfáticos en señalar en que el éxito del proyecto y su sostenibilidad están estrechamente relacionados con garantizar su participación durante el proyecto. Los representantes institucionales recalcaron que era necesario garantizar esa participación, pero que también era fundamental buscar fórmulas para diseñar estructuras operativas para la toma de decisiones. La discusión en cuanto a este tema concluyó con la definición de los principios que la estructura debía respetar, y el encargo a la consultora en articular propuestas que debían ser discutidas en un próximo taller. Así los principios acordados fueron los siguientes:

⇨ Promover el establecimiento de una estructura que se fundamente en un enfoque territorial y basado en la unidad cuenca como eje de planificación.
⇨ Establecer una estructura que sirva como base para la creación de un Organismo de Cuenca que permanezca en el tiempo, aun después de finalizado el proyecto GEF Sixaola.
⇨ Fortalecer la gestión descentralizada-local como base para lograr una gestión integral de la Cuenca Binacional.
⇨ Aprovechar el marco legal binacional existente (Convenio entre el Gobierno de la República de Costa Rica y el Gobierno de la República de Panamá sobre Cooperación para el Desarrollo Fronterizo y su Anexo en adelante referido como el Convenio Binacional Fronterizo).
⇨ Fortalecer los esfuerzos de integración entre Costa Rica y Panamá
⇨ Capitalizar las experiencias de conservación y desarrollo sostenible que han operado y que funcionan actualmente en la cuenca.

- ⇨ Propiciar que las instancias sectoriales con presencia en la región, los Municipios y la población local sean participantes y beneficiarios directos en el proyecto, de forma tal que se garantice la sostenibilidad en el tiempo de las estructuras propuestas, así como de las actividades desarrolladas.
- ⇨ Generar una estructura eficiente, poco costosa para el manejo de los fondos y la facilitación técnica del proyecto.

2. Taller binacional de Áreas Silvestres Protegidas (ASP) y Biodiversidad. Changuinola (Panamá), 9 de febrero de 2006

El 9 de febrero de 2006 se realizó un taller específico sobre ASP y Biodiversidad de la Cuenca Binacional del Río Sixaola, en la sede Regional de ANAM en Changuinola (Panamá), al cual acudieron 13 participantes:

LISTADO DE PARTICIPANTES EN EL TALLER BINACIONAL DE ÁREAS SILVESTRES PROTEGIDAS (09/02/2006)	
NOMBRE Y APELLIDOS	**INSTITUCIÓN A LA QUE REPRESENTA**
Valentín Pineda	Administrador Regional ANAM
Hernández Bonilla	ANAM
Tomás Mora	ANAM
Benigno Villamonte Álvarez	PILA Caribe-ANAM
Nelson Elizondo Torres	Administrador PILA-Pacífico MINAE-Costa Rica
Earl Junier Libdo	MINAE-Costa Rica
Martín Bermúdez Guillén	Corredor Biológico Talamanca-Caribe (CBTC)
Ángel González	UICN
Arcadio Aguilar	UICN-Alianza Bocas
Abelardo Torres	ADITIBRI
Hilario Villalvilla Asenjo	EPYPSA/INCLAM/CEDARENA
Carlos Borge	EPYPSA/INCLAM/CEDARENA
Ramón Alvarado Quirós	EPYPSA/INCLAM/CEDARENA

El objetivo fue analizar las necesidades en materia de protección y manejo sostenible de la biodiversidad y ASP en la cuenca, para lo cual se preparó un borrador de propuestas de intervención para ser incorporadas al proyecto GEF, que fue analizado y discutido por los agentes que acudieron al mismo. El paquete de propuestas se estructuró en cuatro ámbitos de actuación: *ámbito marco*, el conjunto de la Reserva de la Biosfera Amistad, de la cual forma parte la cuenca del Sixaola; *ámbito del Parque Internacional La Amistad* (PILA), que constituye el área protegida binacional emblemática y nuclear de la RBA; *cuenca del Sixaola*, ámbito estricto de actuación del GEF; y *ámbitos territoriales de la cuenca de los ríos Yorkín y Urén, así como de los humedales protegidos de San San Pond Sack y Refugio de Vida Silvestre Gandoca_Manzanillo*, que presentan problemáticas concretas que requieran de actuaciones específicas.

En el taller fueron discutidas las acciones propuestas, de lo cual resultó un importante paquete de intervenciones, las cuales fueron validadas en los días posteriores a la celebración del taller por las autoridades ambientales, ONG,s ambientalistas y dirigencia indígena centrales, contando con un consenso importante.

3. Segundo Taller Binacional General. Isla Colón, Bocas del Toro (Panamá), 20 a 22 de febrero de 2006

Este taller se desarrolló del 20 al 22 del mes de febrero de 2006 en la isla Colón, en Bocas del Toro (Panamá). De acuerdo con lo establecido en el primer taller binacional, se organizó un taller con los representantes claves de los actores definidos como críticos para el proceso para lograr así con lo cual se invitaron a los mimos representantes que participaron durante el segundo día del taller anterior. A continuación se desglosa la lista de participantes:

LISTADO DE PARTICIPANTES EN EL SEGUNDO TALLER BINACIONAL (20, 21 Y 22/02/2006)	
NOMBRE Y APELLIDOS	**INSTITUCIÓN A LA QUE REPRESENTA**
Israel Barrera	Ministerio de Economía y Finanzas de Panamá (MEF)
Georgina Osorio	Ministerio de Economía y Finanzas de Panamá (MEF)
Yalili Céspedes	Ministerio de Planificación Económica de Costa Rica (MIDEPLAN)
Luís Fallas Calderón	Ministerio de Planificación Económica de Costa Rica (MIDEPLAN)
Gilberto Rodríguez Zúñiga	Ministerio de Planificación Económica de Costa Rica (MIDEPLAN)
Sharon Jonnes	JAPDEVA
Jorge Romero	Programa de Desarrollo Sostenible de Bocas del Toro
Yamil Thomas	Programa de Desarrollo Sostenible de Bocas del Toro
Carlos Melgarejo	Autoridad Nacional Ambiental de Panamá (ANAM)
Roberto Galán	Autoridad Nacional Ambiental de Panamá (ANAM)
Darisbeth Martínez	Autoridad Nacional Ambiental de Panamá (ANAM)
René Rodríguez	Autoridad Nacional Ambiental de Panamá (ANAM)
Benigno Villamonte	ANAM-PILA
Lesbia Sevilla	SINAC-MINAE Costa Rica
Marcelo Pacheco	ACLAC-SINAC-MINAE Costa Rica
Gladylin Serrano	Ministerio de Desarrollo Agropecuario-Bocas del Toro
Bill Mclanney	Asociación Ambientalista ANAI
Maribel Mafla	Asociación Ambientalista ANAI
Rosa Bustillo	Corredor Biológico Talamanca-Caribe
Juan Obando	AAMVECONA
Vicente Romero	ACTEIBRI
Sebastián Díaz	ADITIBRI
Maira Olivier Blanco	ADITIBRI
Norman Wood	COCABO-ACICAFOC
Rodrigo Coloane	BID/Panamá
Luis Hernando Hintze	BID/Costa Rica
Henrik Franklin	BID/RE2-EN2
Henry Salazar	BID/SDS-ENV
Ana María Linares	BID/ RE2-EN2
Luis Fernando Sage	EPYPSA/INCLAM/CEDARENA
José Armando Díaz Díaz	EPYPSA/INCLAM/CEDARENA
Del Roy Barton	EPYPSA/INCLAM/CEDARENA

Jesica Young	EPYPSA/INCLAM/CEDARENA
Gabriela Cuadrado	EPYPSA/INCLAM/CEDARENA
Hilario Villalvilla Asenjo	EPYPSA/INCLAM/CEDARENA
Andrea Meza Murillo	EPYPSA/INCLAM/CEDARENA
Rolando Castro	EPYPSA/INCLAM/CEDARENA
Ramón Alvarado Quirós	EPYPSA/INCLAM/CEDARENA

Los objetivos planteados en este segundo taller binacional estuvieron relacionados con la validación de dos aspectos básicos del proyecto: (i) revisión y validación del marco lógico y propuesta de intervención; y (ii) validación del esquema de ejecución y arreglos institucionales necesarios para el proyecto.

El primer día del evento se realizó una presentación de la propuesta de intervención del proyecto, así como de la propuesta de ejecución por parte del equipo consultor. Se discutió ampliamente la propuesta de ejecución. Si bien se propuso una estructura de ejecución binacional y altamente participativa, fue necesario realizar una reunión aparte entre los representantes de los Gobiernos y la agencia ejecutora para aclarar detalles de los arreglos institucionales necesarios para operar el proyecto. Durante esta reunión, los Gobiernos acordaron que ambos firmarían el contrato con la agencia ejecutora, por lo cual se convertirían en co-ejecutores, y que para estos efectos, basaban su decisión en el marco legal que brinda el Convenio de Cooperación Fronterizo Costa Rica-Panamá, contribuyendo así con en el proceso de integración entre ambos países. Sin embargo, ante la ausencia de personería jurídica por parte del Convenio, se llegó a la siguiente propuesta :

⇒ Se establecería una Comisión Binacional de Cuenca integrada por representantes institucionales y de la sociedad civil, que se espera sea la semilla para consolidar un órgano gestor de cuenca. Esta comisión se basaría en subcomités de cuenca (alta, media, baja) para asegurar la participación de los actores que están más cerca de los recursos.
⇒ Se establecería una Unidad Ejecutora Binacional (con base en el Convenio) con representantes del ANAM, MINAE, y el equipo técnico que se contrate para el proyecto (1 Coordinador y dos técnicos de refuerzo)
⇒ Se contrataría a una entidad para la estricta administración de fondos: esto por cuanto, la unidad ejecutora que nace del convenio no cuenta con personería jurídica, y se quiere contar con una estructura que permita una administración eficiente y ágil de los recursos.

El segundo día de reunión se realizó un trabajo en grupos, para lo cual se establecieron mesas de trabajo de acuerdo con los 3 componentes del proyecto: (i) fortalecimiento institucional; (ii) aguas y suelos, y (iii) protección y uso sostenible de la biodiversidad. En esas mesas se facilitaron discusiones que permitieron establecer actividades prioritarias y metas que el proyecto debía alcanzar. Estos fueron los insumos fundamentales que se utilizaron para la elaboración final del marco lógico.

Este trabajo se cerró con una plenaria en la que los grupos de trabajo expusieron los resultados de su trabajo dando recomendaciones concretas para el Marco Lógico. Durante la tarde de ese día, se estableció un equipo de trabajo compuesto por representantes de los Gobiernos, el Equipo BID, y la firma consultora para incorporar los insumos en la elaboración de una propuesta de marco lógico.

D. Estrategia para Facilitar la Participación del Público durante la Ejecución del GEF Sixaola

La Cuenca Binacional del Río Sixaola cuenta con un tejido asociativo amplio, especialmente notorio en el sector costarricense, y aunque un poco menos notorio, igualmente demandante en el sector panameño. Estos actores cuentan con un conocimiento inigualable de la zona y sus recursos, han generado basta experiencia en proyectos de conservación y son por lo tanto, pieza fundamental para el buen desempeño de este proyecto. Los diferentes sectores (institucionales, productivos, ambientalistas, de base) se reconocen responsables y beneficiarios directos del patrimonio natural de la cuenca, y desde esta óptica demandan una participación activa en la toma de decisiones del proyecto.

Son estos aspectos los que han generado que el tema participativo se convierta en uno los principios rectores en la definición del proyecto. El involucramiento de estos actores se garantizará de diversas maneras:

⇒ **Mediante su participación en los procesos de planificación del proyecto:** la cual se logrará a través de los sub-comités de cuenca, cuya principal función es la identificación y priorización de problemas y soluciones que están afectando cada uno de los ámbitos de la cuenca (alta, media, baja). Estos sub-comités deberán retroalimentar y asesorar a la Unidad Ejecutora Binacional en sus decisiones, y serán el espacio que permitirá que las decisiones se tomen más cercana física y administrativamente al recurso, garantizando así un balance entre los intereses públicos y locales, poniendo así en práctica el enfoque ecosistémico.

⇒ **Mediante su participación en la aprobación del Plan Operativo Anual:** el plan constituye la hoja ruta del proyecto, y la participación de los actores en este nivel representa una participación directa en las decisiones de asignación de fondos. Se ha definido que la Comisión Binacional de Cuenca, será la entidad que aprobará el POA. Igualmente se ha definido que esta Comisión contará con la participación de diversos sectores del nivel institucional (MAG-MIDA, MINAE-ANAM, Ministerios de Salud, Municipalidades, CNE-SINAPROC), y del nivel social (sector indígena, productivo, ambientalista, de base).

⇒ **Mediante su participación en la Unidad Ejecutora:** la unidad contará con la participación de un funcionario de MINAE, otro de ANAM y el equipo consultor de soporte que se contrate. Un aspecto que se discutió y se decidió posteriormente fue la necesidad de incluir 1 representante indígena, que también participe en el día de las decisiones, y los aspectos ejecutivos del proyecto.

La participación de estos actores sociales e institucionales en estos tres ámbitos permitirán que estos actores sean los protagonistas de este proyecto, aumentando así las posibilidades de sostenibilidad después de terminado el proyecto. Su participación en estos tres niveles tiene el doble propósito de permitir su fortalecimiento mediante el acompañamiento técnico que se realizará, así como parte del proceso que debe efectuar el equipo técnico que se contrate para la Unidad Ejecutor Binacional.

El Proyecto también ha establecido una serie de mecanismos para facilitar la socialización, entre otros los siguientes: programas interactivos de sensibilización ambiental, intercambios horizontales, medios de divulgación (página web, boletines), participación en foros, intercambios de experiencias, para asegurar el intercambio de experiencias y la difusión de conocimiento y de lecciones aprendidas, todas orientadas a fortalecer las capacidades de estos actores y a consolidar este patrimonio humano.

Appendix I: Copies of Co-financing Commitment Letters

Ministro de Planificación Nacional
y Política Económica
República de Costa Rica

22 de marzo de 2006
D.M.0241-06

Doctor
Leonard Good, CEO
Global Environment Facility
Washington D.C

Estimado señor Good:

Mediante la presente me permito comunicarle la disposición del Gobierno de Costa Rica de continuar apoyando el proceso hacia la consolidación del proyecto denominado **"Manejo Integrado de los Ecosistemas de la Cuenca Binacional del Río Sixaola (GEF SEC Project ID: 2517)"**.

En aras de lograr que este proyecto, prioritario para Costa Rica sea aprobado, le agradecemos su valiosa colaboración.

Cordialmente,

Florita Azofeifa Monge
Ministra a.i.

MINISTERIO DE PLANIFICACION NACIONAL Y POLITICA ECONOMICA
MINISTRO
SAN JOSE, COSTA RICA

c: Sr. Ricaurte Vázquez, Ministro de Economía y Finanzas; República de Panamá
Sr. Roberto Tovar Faja, Ministro de Relaciones Exteriores y Culto, República de Costa Rica
Sr. Carlos Manuel Rodríguez Echando, Ministro de Ambiente y Energía, República de Costa Rica
Sr. Jorge Polinaris Vargas, Ministro de Planificación Nacional, República de Costa Rica

República de Panamá
Ministerio de Economía y Finanzas
Despacho del Ministro

20 de marzo de 2006
DS-UCCA-N-No. 007

Señor
Jeremy Gould
Representante Residente
Banco Interamericano de Desarrollo
E. S. D.

Señor Representante:

En el ámbito del Convenio sobre Cooperación para el Desarrollo Fronterizo Panamá – Costa Rica y con el apoyo del Banco Interamericano de Desarrollo (BID), se diseñó la Estrategia Regional para el Desarrollo Sostenible de la Cuenca Binacional del Río Sixaola (ERDS). La ERDS prevé actividades binacionales conjuntas, muchas de las cuales se dirigen a enfrentar amenazas a la integridad de la cuenca y su biodiversidad.

En noviembre de 2004, el Fondo para el Medio Ambiente Mundial (GEF) aceptó la inclusión en su "pipeline" bajo el Programa Operativo 12, Manejo Integrado de Ecosistemas, del Proyecto Gestión Integrada de Ecosistemas de la Cuenca Binacional del Río Sixaola. Este proyecto se orienta a actividades binacionales y complementará las líneas estratégicas de acción y actividades de gestión ambiental, manejo sostenible de recursos naturales y reducción de vulnerabilidades que ejecuta Panamá a través del Programa Multifase de Desarrollo Sostenible de la Provincia de Bocas del Toro (1439/OC-PN), en esta zona.

En febrero de 2005 el Banco Interamericano de Desarrollo (BID) informó la aprobación de fondos GEF por un monto de US$500,000.00, para la preparación y formulación del documento PDF-B para el Proyecto Manejo Integrado de Ecosistemas de la Cuenca Binacional del Río Sixaola (GEF-BID. ATN/FM-9072-RS). El mismo será sometido a la consideración del GEF el próximo 24 de marzo.

Como responsable de las actividades que se realizan bajo el Convenio Fronterizo Panamá – Costa Rica y a solicitud de la Autoridad Nacional del Ambiente (ANAM), deseamos reiterar nuestro interés en este proyecto.

Atentamente,

Ricaurte Vásquez M.
Ministro

c.c. Licenciada Ligia Castro de Doens, Administradora General, Autoridad Nacional del Ambiente.