

## MEDIUM SIZED PROJECT BRIEF

### PROJECT SUMMARY

#### Project Identifiers

<b>1. Project name:</b> Monitoring the Galápagos Islands	<b>2. GEF Implementing Agency:</b> World Bank
<b>3. Country:</b> Ecuador	<b>4. Country Eligibility:</b> Ecuador ratified the Convention on Biological Diversity on February 10, 1993.
<b>5. GEF Focal Area:</b> Biodiversity	<b>6. Operational Program/Short-Term Measure:</b> Operational Program Number 2: Coastal, Marine, and Freshwater Ecosystems
<b>7. Project linkage to national priorities, action plans and programs</b> The Ecuadorian Environmental Plan (Plan Ambiental Ecuatoriano, PAE), adopted in 1995, includes as one of its environmental priorities the “management of fragile ecosystems,” and the implementation of the Galápagos Management Plan is recognized as a priority. In addition, the Ecuadorian Government’s “Social Development Plan” (Plan de Desarrollo Social), published in 1996, recognizes the Galápagos as one of the priority areas for projects which include a focus on the management and conservation of natural resources. The Executive Decree #245, dated 28 April 1997, also declares the conservation of the Galapagos ecosystem a national priority. Finally on March 6, 1998 the National Congress approved the “Galápagos Special Law”, defining a new and improved legal and institutional framework for the management of the Galápagos Islands. This law was promulgated on March 18, 1998.	
<b>8. GEF national operational focal point and date of country endorsement:</b> Ministry of the Environment – Endorsed: July 20, 1998.	
<b>9. Project Rationale and Objectives</b>  <u>Objectives:</u>  a. To establish a sound monitoring system to measure the well being of the ecoregions of the Galápagos Islands. b. To monitor the key sustainability variables of the Galapagos Islands. c. To provide information to local stakeholders and policy makers for the adequate management of the Galápagos ecoregions.	<u>Indicators:</u>  a. Trends of the principal sustainability variables are identified and analysed. b. Policy makers’ and local stakeholders’ decisions are increasingly based on the information provided by the monitoring system.
<b>10. Expected Outcomes</b>  a. Establishment of a system to monitor the impact of the fishing sector on the ecosystem  b. Establishment of a biological monitoring system	<u>Indicators:</u>  a. Fisheries information collected, systematized and available in a database (monitoring of the catch rate of certain species, market-related information, change in the number of and follow-up on legal suites filed regarding violation of fishing regulations). b. Biological information collected, systematized and available in a database (monitoring of the status of introduced species, application of quarantine system, change in status of endangered species, preservation of evolutionary processes).

<p>c. Establishment of a system to monitor tourism on the Galápagos Islands.</p> <p>d. Establishment of a system to monitor social and economic status of the local population.</p> <p>e. Strengthened capacity of local organizations to ensure the compilation and use of information provided by local stakeholders (fishing cooperatives, recycling groups, local Artisans, farmers, tourism guides, etc).</p> <p>f. Improved flow of information to policy makers, and National Park and Marine Reserve managers, allowing for a better-informed management of Galápagos Ecosystems.</p>	<p>c. Tourism information collected, systematized and available in a database (distribution of tourist fees, tourists per site, compliance with defined carrying capacity, degree of visitors' satisfaction).</p> <p>d. Socioeconomic information collected, systematized and available in a database (migration rates, poverty levels, and income levels).</p> <p>e. Improved capacity of local agencies and organizations in the utilization of relevant information.</p> <p>f. Policy makers' provided with updated, accurate and relevant information to guide the decision-making for the sustainable management of Galápagos ecoregions.</p>
<p><b>11. Planned activities to achieve outcomes</b></p> <p>a. Collection of information and identification of research priorities related to monitoring and management actions.</p> <p>b. Organization and analysis of information, development of database and GIS.</p> <p>c. Disseminate information and provide methodological support.</p> <p>d. Training and organizational development of stakeholders in information collection and analysis for policy development.</p>	<p><u>Indicators</u></p> <p>a. Local institutions incorporate within their normal operations the collection of the information required for policy assessment.</p> <p>b. GIS and database operating effectively and are available for public use.</p> <p>c. Publications and audiovisual materials edited and distributed to relevant agencies.</p> <p>d. Local agencies are capable of managing the information available in the database and GIS.</p>
<p><b>12. Estimated Budget:</b></p>	
<p>GEF</p>	<p>\$941,350</p>
<p>Co-Financing (Phase I, 1996-1998)</p>	<p>\$175,000 (WWF)</p>
<p>Co-Financing (Phase II, 1998-2001)</p>	<p>\$474,200 (WWF, Fundación Natura, Fundación Charles Darwin)</p>
<p><b>13. Information on Project Proposer: Fundación Natura and World Wildlife Fund, WWF</b></p> <p>Fundación Natura is an Ecuadorian non-governmental organization founded in 1978. The Institutional Mission of Fundación Natura is the protection of the environment, the preservation of biodiversity and the sustainable management of natural resources in order to improve the quality of life of both the present and future generations, through the transformation of human behavior, the raising of environmental awareness in society and the development of a new social ethos.</p> <p>World Wildlife Fund - WWF, leads worldwide efforts to protect endangered wildlife and wildlands. For more than three decades, WWF has led international efforts to conserve the wealth of life on Earth. WWF's work is driven by a passion for nature, grounded in science, and shaped by an understanding that addressing human needs is critical to successful long-term conservation. WWF has national organizations or representatives in more than 50 countries, and works in more than 100 countries throughout the world. WWF has supported projects in Ecuador since 1961. The Galápagos Islands</p>	

ecoregions are currently identified as Focal Ecoregions in the Latino American and Caribbean Program. Since 1996 WWF has a locally based Program Director coordinating the Galápagos Initiative in close collaboration with Fundación Natura and other relevant partners.

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

**15. Date of initial submission of Project Concept:** December 18, 1997.

**16. Project identification number:**

**17. Implementing Agency contact person:**

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**18. Project linkage to Implementing Agency program(s):**

The World Bank is supporting two related operations in Ecuador: (i) the Biodiversity Protection Project financed by a GEF Grant (TF-28700-EC) and implemented by INEFAN. The main objective of this project is to support the restructuring and strengthening of the institutional capacity and overall policy and legal framework for adequate management of the National System of Protected Areas (NSPA). The Galapagos National Park is part of the NSPA. Under the Institutional Strengthening component the grant is financing studies to determine economic values for goods and services generated through resource use in the protected areas. Nature tourism is the most important source of revenue for several protected areas of the NSPA, particularly for Galápagos. Thus, the project is financing the design of an improved system of collection and allocation of revenue from this resource and a review of the role and responsibilities of tour operators in promoting conservation while allowing sustainable revenue generation. The monitoring system of the proposed project would complement what has been done so far and would strengthen those efforts; and

(ii) the Environmental Management Technical Assistance Project co-financed by a Bank loan (3998-EC) and implemented by the Ministry of Environment. The main objectives of this project are (I) to strengthen the national institutional capacity to undertake environmental policy analysis and environmental program design and management; (ii) to strengthen the environmental management capability of the Ministries of: Urban Development (MIDUVI), Energy and Mines (MEM) and Industries, Commerce and Fisheries (MICIP); and (iii) build institutional capacity and carry out the participatory processes and technical analysis required to resolve Ecuador's most serious environmental problems particularly those related to pollution of the Gulf of Guayaquil and the area in the Amazon most affected by oil exploration and production. Among the activities being carried out by the MICIP is the review of existing fisheries polices and preparation of revised regulations including the upgrading of its fisheries resource monitoring system. The results and methodology of this MICIP activity will be integrated in the design of the system proposed under the MSP to monitor fishing activities in Galápagos.

## PROJECT DESCRIPTION

### Project Rationale and objectives:

The project will establish a monitoring system that will monitor the status of the ecoregions of the Galápagos Islands. The monitoring system will include an ongoing assessment of the effectiveness of public policies related to the Galápagos. The Galápagos is a site of global importance, widely known for the remarkable adaptive radiation shown by its plants and animals. Both flora and fauna, terrestrial, coastal and marine, display a high degree of endemism; more than in any other tropical island ecosystem. This project will support integrated marine and coastal area management as the framework for conservation and sustainable use of the Galápagos biodiversity.

While the Galápagos have survived major human incursion thus far, it faces significant threats including:

- a. Tourism to the Galápagos has been growing at an ever-increasing rate, and could have a negative impact on the islands' fragile ecosystems;
- b. Heavy external demand for marine products, in particular sea cucumbers and shark fins, has led to overfishing;
- c. Immigration from mainland Ecuador to the Galápagos has increased as Ecuadorians have flocked to the Galápagos looking for jobs in tourism and fishing activities. The existence of government subsidies for those who live on the Galápagos contributes to an increase of population;
- d. With a greater influx of tourists and immigrants, the threat of introducing foreign species grows proportionately;
- e. Local capacity to monitor the environmental situation in the Galápagos is limited, as is the advocacy power of local conservation organizations with the Ecuadorian Government; and
- f. The Ecuadorian Government has played an active role in conserving the Galápagos, but political commitment to limit immigration, fisheries, and tourism is dependent on economic pressures.

The information that exists to evaluate the impacts of these threats on the ecosystem is not adequately collected, consolidated and used to influence policies regarding conservation in the Galápagos. In short, conservation planning efforts for the Galápagos manifest, at a minimum, three deficiencies: 1) the lack of adequate local participation in the development of policies related to the Galápagos; 2) the lack of policy evaluation mechanisms; and, 3) institutional difficulties in the application of policies due to overlap in jurisdictions, limited resources available for monitoring, and pressures from diverse stakeholders.

Among the reasons for this situation are the lack of adequate information allowing citizen participation, providing an appropriate basis for evaluation and fluent dialogue among social actors. This project will contribute to the solution of these problems. While monitoring activities are included in the sectoral development and conservation plans, a comprehensive, coherent, and user-friendly system is needed to monitor policy impact and conservation status of the Galápagos. The system that will be developed should promote the strengthening of local organizations, allowing them to use the information available to promote and participate in multi-sectoral dialogues with all stakeholders regarding the conservation of the Galápagos.

**Objectives:**

- a. To establish a sound monitoring system to measure the well being of the ecoregions of the Galápagos Islands.
- b. To monitor the key sustainability variables of the Galápagos Islands.
- c. To provide information to local stakeholders and policy makers for the adequate management of Galápagos ecoregions.

**Current Situation:**

**Background-Phase I.** In March 1996, Fundación Natura and WWF initiated a pilot project that monitors the application of policies related to conservation and development of the Galápagos. This pilot project should be considered as the Phase I in the process to develop an independent monitoring and evaluation system of public policies in, and status of, the Galápagos Islands. The project focused on gathering information that allows for an ongoing evaluation and included the following activities: 1) the collection of existing information that was quite dispersed, such as information on social issues (education and health statistics) and biological issues (related to fisheries and endangered species); 2) the identification of indicators to monitor policy impact; and, 3) the identification of gaps in information needed to adequately monitor progress towards conservation of the Galápagos.

During Phase I of the Project the following results were obtained: 1) Two issues of the “Galápagos Report” (1996-1997 and 1997-1998) were published and disseminated to all relevant institutions; 2) Collaborative agreements have been signed for information exchange and utilization for planning purposes with the CDRS, the INGALA, Ministries of Health and Education and the National Park Service; 3) Two databases (socioeconomic and biological) were designed, established, and implemented through data entry and updating; 4) A Memorandum of Understanding (MOU) for the design, structuring and permanent updating of a Geographic Information System (GIS) for the Galápagos Islands has been signed between 9 participating institutions<sup>1</sup>; this GIS will be the basis for an information exchange network, and the base mapping is already compiled and digitized, and 5) Practically all institutions and organizations in Galapagos know the Monitoring Project, increasingly recognize its usefulness, and are eager to collaborate.

Based on the lessons of Phase I, the Phase II MSP will: expand and deepen the data collection, monitoring, and evaluation process, build local government and non-government capacity to maintain such a system after the project ends, and strengthen the dissemination and feedback of monitoring results into policy making, through close relations with local authorities and civil society organizations and through local, national and international communications efforts.

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<sup>1</sup> Centro de Levantamientos Integrados de Recursos Naturales por Sensores Remotos (CLIRSEN), Instituto Geografico Militar (IGM), Centro Panamericano de Investigaciones Geograficas (CEPEIGE), Fundacion Charles Darwin (FCD), Servicio del Parque Nacional Galapagos (SPNG), Fundacion Natura (FN), Instituto Nacional Galapagos (INGALA), Centro de datos para la Conservacion (CDC), Instituto Oceanografico de la Armada (INOCAR).

**Recent Developments:** On March 6, 1998, the Ecuadorian Congress approved the Galápagos Special Law (*Ley De Régimen Especial para las Islas Galápagos*). This Law uses special provisions of the Ecuadorian Constitution, allowing specific policies to be established, and thereby contributing towards the conservation of the Galápagos Islands. Among them, are policies related to migratory control, implementation of an effective quarantine system, enhanced participation of civil society and protection of marine ecosystems. Overall the new Special Law will strengthen the attributions of the local institutions, delegating more responsibilities on the Galapagos stakeholders. INGALA (Galápagos National Institute), responsible for planning and development of the populated areas of the Galápagos Islands, is being restructured to enhance its capacities to apply the Galápagos Special Law; this restructuring will include a change in its Board composition.

Within the context of a changing legal, regulatory and institutional framework of the Galápagos the availability of independent, reliable and timely information is crucial to improve the “quality” of participation of the different actors. Scientifically based information will provide an environment for honest discussions and enhance the capacity of civil society to influence the implementation of public policy. The proposed MSP monitoring and evaluation system of the application of these policies will provide an essential feedback to improve the effectiveness of the authorities performance. Particular attention will be given in the Phase II MSP to strengthen the dissemination and feedback of the monitoring results into policy making through close relations with local authorities and organizations of the civil society, and through local, national and international communications efforts.

**Other Related Activities:** Within the scope of the Master Biodiversity Plan (Plan Maestro de Biodiversidad), an INEFAN project supported by the WB/GEF is currently under implementation; 10 of the project’s thirty-five planned activities contribute towards the conservation of the Galápagos. One of the activities includes the establishment of a system to monitor the impact of tourism in the Galápagos National Park (activity #29). This activity includes an analysis of the carrying capacity for tourism in the Galápagos, and an analysis of and adjustments to the itineraries of tourism boats. However, follow-up activities related to monitoring the actual itineraries of the boats and change in the conservation status of tourists sites are not included as part of this activity. It is also important to note that while activity #8 of the Master Biodiversity Plan includes the establishment of a monitoring pilot program of the socioecological conditions of Ecuador’s System of Protected Areas (Sistema de Areas Naturales), the pilot does not include the Galápagos National Park.

Other important related activities taking place in the Galápagos include the following: the Ministry of Agriculture is implementing the pilot phase of the Inspection and Quarantine System; the state owned electricity company, in coordination with UNDP, is preparing a full scale proposal to develop alternative energy sources with GEF support; local stakeholders are updating the Galápagos Marine Reserve Management Plan under the direction of the National Park Service; and the local Municipalities are initiating participatory planning processes in their jurisdictions.

The National Park Service, the Charles Darwin Research Station (CDRS) and the UNDP are preparing a project to control introduced species in the Galápagos Archipelago as a means of conserving globally outstanding marine, coastal and terrestrial biodiversity. This project will be presented to the GEF for financial support. The biological monitoring component of this planned project will be coordinated with the present proposal, in order to avoid potential overlaps and ensure the cost-effectiveness of the two initiatives.

### **Expected project outcomes with underlying assumptions and context:**

Conservation and development planning and definition of public policies in Galápagos have a long history. The first Management Plan for the Galápagos National Park is from 1974, and since then there have been nine different global planning initiatives. There are an enormous number of dispersed diagnoses and biological and socioeconomic information. But this information has not been used systematically to evaluate public policy, both its implementation and its effectiveness. A permanent and independent evaluation process is a prerequisite for the better management of the Galápagos.

Within this context, the proposed MSP will produce, after three years, the systematized information required for evaluation, design and adjustment of effective conservation and development policies for Galápagos. This includes:

- a. Establishment of a system to monitor the impact of the fishing sector on the ecosystem;
- b. Establishment of a biological monitoring system;
- c. Establishment of a system to monitor tourism on the Galápagos Islands;
- d. Establishment of a system to monitor social and economic status of the local population;
- e. Strengthened capacity of local organizations to ensure the compilation and use of information provided by local stakeholders (representatives of fishing cooperatives, recycling groups, local artisans, farmers, and tourism guides); and
- f. Improved flow of information to policy makers, and National Park and Marine Reserve managers, allowing for a better-informed management of Galápagos Ecosystems.

### **Activities and financial inputs needed to enable changes**

EXPECTED OUTCOME 1 : Establishment of a system to monitor the impact of the fishing sector on the ecosystem.

This outcome requires a combination of monitoring of the fishing activity, monitoring to detect changes in the marine ecosystem and resources, and building the capacity of the participants in marine reserve management, both authorities and stakeholder groups. The activities related to this outcome will concentrate on monitoring catches and fishing effort and combine this information with trends in marine biodiversity. (Total cost: \$181,000; GEF: \$104,000).

#### *Expected outputs*

- a. Participatory monitoring system of fisheries catch in Santa Cruz, Isabela and San Cristóbal Islands, with three years of data analyzed; and
- b. Analysis of relationships between fishing activities and trends in: (a) vulnerable coastal species; and (b) benthic biodiversity from sample sites in the various marine biogeographic zones.

### EXPECTED OUTCOME 2 : Establishment of a biological monitoring system

A systematic ecological monitoring program is essential for a vulnerable ecosystem known to be undergoing rapid change. Such a system is long overdue for Galápagos Islands<sup>2</sup>. There are several different variables, which should ideally be monitored, principally: status of key populations of important or endangered species; integrity of biological communities (i.e. degree of modification or restoration); and the arrival/dispersal of new alien species. The implementation of planned management measures would also be tracked. Ecological monitoring would span the whole archipelago, on land and underwater, with particular attention to priority islands. In the case of insects, a highly endemic group showing rapid change as a result of invasion by alien species, a prior task to monitoring is the completion of a definitive baseline and reference collection. Another activity would be the definition of the measurable characteristics of the biological communities. Moreover the appropriate supporting technology, including a well-designed GIS, would be developed. This project will enable the basic ecological monitoring program to be launched and priority data gathered and analyzed. It will focus on terrestrial and coastal biodiversity, rather than strictly marine. (Total cost: \$446,600; GEF: \$326,600).

#### *Expected outputs*

- a. Key indicators for the monitoring system fully defined and tested by the end of year 1, with a brief summary of recent available data for each;
- b. From Year 2 onwards, annual summaries of (a) the flora and fauna of a small sample of the 102 smaller (< 200 ha) islands; (b) new colonization of at least two of the six most pristine larger islands (Fernandina, Santa Fe, Española, Marchena, Genovesa, Pinta); (c) new introductions and major changes in distribution of a selection of the most invasive or harmful introduced species on at least two of the remaining eight large islands (Isabela, Santa Cruz, Santiago, San Cristóbal, Floreana, Pinzón, Baltra and Rabida);
- c. From Year 2 onwards, annual summaries of the status of selected populations of key endemic species, including at least five of the following: the giant tortoise, land iguana, mangrove finch, penguin, cormorant, selected butterfly species, species of the genus *Scalesia*, and other selected threatened plants;
- d. Data compiled on possible causative factors of the trends observed (e.g. climate, management of agricultural land) and on preventive measures (e.g. implementation of quarantine system);
- e. GIS and database systems set up and operational for storage and analysis of monitoring data; and
- f. Summary reports of the monitoring results and their correlation with possible causative factors, plus complementary scientific publications.

### EXPECTED OUTCOME 3 : Establishment of a system to monitor tourism

Tourism is one of the main activities of the local population, the most important source of income and one of the principal uses of the Galápagos National Park. Due to a widely-held assumption that tourism favors continental and foreign companies to the detriment of locally based companies, development agencies are

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<sup>2</sup> While the Galápagos Islands have been the subject of much biological research, little of this research effort and the information generated were produced for the purpose of monitoring and managing the ecoregions as an integrated whole.



interested in promoting “locally based tourism”. To assist in managing the current and future tourism influx, the Galápagos National Park’s Management Plan of 1996 defines the carrying capacity of 54 terrestrial tourist sites<sup>3</sup>.

Within this context it is essential to monitor both the distribution of the funds produced by tourism and the compliance with the carrying capacity limits of the tourist sites. These monitoring activities include the changes on the physical and ecological characteristics of the sites and the evolution of the visitor’s satisfaction. Since Galápagos visitor sites are restricted in size, other kinds of ecological impact (e.g. changes in bird breeding success) would only be important if the visitor site was close enough to impact a significant population of an uncommon species. (Total cost: \$165,650; GEF: \$130,650).

*Expected outputs*

- a. Data obtained on presence of alien species at or close to terrestrial visitor sites in ecologically important locations;
- b. Systematization of historical information related to ships’ itineraries and reports of the tourist guides as part of the National Park Service’s GIS.
- c. Implementation and analysis of quarterly polls on visitor’s satisfaction; and
- d. Analysis of tourism revenues, including its distribution among the Galápagos and the continent.

EXPECTED OUTCOME 4: Establishment of a system to monitor social and economic status of the local population (migration rates, poverty levels, and income levels).

The monitoring of the socioeconomic conditions of the Galápagos population will cover different aspects: changes in quality of life and the relationships between socioeconomic situation and environmental trends<sup>4</sup>. Some issues are crucial in relation to the new Special Law: migration control and reduction of population growth, public investment and general budget, economic subsidies, quality of public services (education, health, infrastructure), levels of consumption, expenditure, employment and salaries of the population, agricultural policies in relation to introduced species. (Total cost: \$265,900; GEF: \$118,700).

*Expected outputs*

- a. Systematization of the indicators designed and the information compiled in the Phase I of the Project, using GIS capacity and data base analysis (population, agricultural sector, public services, public expenditure, etc.);
- b. Identification and development of applied research activities related to the monitoring systems (cost of living estimates, consumption and quality of life, employment and salaries); and
- c. Evaluation of migratory dynamics and results of the implementation of policies related to migration control.

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<sup>3</sup> Over 90% of tourists visit only terrestrial sites, therefore the emphasis of the Management Plan. Nevertheless, when the Galápagos Marine Reserve will be approved the possibility of incorporating diving sites could be explored.

<sup>4</sup> Research and monitoring of socioeconomic variables in the Galápagos Islands have been neglected compared to biological topics, despite the significance of human impacts on ecosystem health. In a number of cases there is a need to compile basic information which has never been collected (eg, basic needs basket, consumer prices). The MSP will make possible the compilation and analysis of such basic data by relevant institutions.

EXPECTED OUTCOME 5: Strengthened capacity of local organizations to ensure the compilation and use of information by local stakeholders (representatives of fishing cooperatives, recycling groups, local artisans, farmers, and tourism guides).

Training and organizational development activities, targeted to potential information users, were an important element of the Phase I Monitoring Project. These activities will continue to be important during Phase II. The activities will include joint evaluations of the quality, future uses and needed adjustments of the system to compile information. There will also be joint analysis of problems and trends in the management and conservation of the Islands. The integration of stakeholders in such a process is essential to ensure that the MSP starts from a stakeholder perception of the key problems and needs of the Islands and answers their technical and administrative requirements. Such integration will also facilitate adaptation and improvement of MSP activities in the course of project implementation, building on stakeholder feedback and actual experience. (Total cost: \$208,200; GEF: \$173,400).

*Expected outputs*

- a. Training and capacity building activities with the local institutions, developing their management capacities of the available information, and setting the basis for future transference of the project components;
- b. Training of community leaders and support for the participation of representatives of organizations in policy dialogues related to conservation in the Galapagos;
- c. Support of the Participatory Management Unit and the Inter-institutional Management Authority of the Galápagos Marine Reserve. This will include dialogue activities, periodic presentations of the monitoring results, training of the sectors represented in the Unit and an ample distribution of the analysis of the monitoring results; and
- d. Gradual transference of project components to key Galápagos institutions, like Municipalities, the Galápagos Institute (INGALA), National Park Service and CDRS, ensuring the long term sustainability of the Monitoring System.

EXPECTED OUTCOME 6: Improved flow of information to policy makers, and National Park and Marine Reserve managers, allowing more informed management of Galápagos Ecosystems.

The Galápagos Special Law creates an Inter-institutional Council for the management of the Marine Reserve and the Board of the Galápagos Institute. Both bodies (together with the National Park Service) have crucial responsibilities in the definition and coordinated application of the conservation and development policies for the Archipelago. Consequently, it is indispensable that these institutions can count on timely and up-to-date information (databases, GIS) and more in- depth analysis of key issues to be able to appropriately manage the Islands and their surrounding waters. To meet this need, the Project will support the annual publication of the Galápagos Report, the systematic preparation of summaries on relevant issues for utilization by key officials, and the work of the planning units of the different institutions. (Total cost: \$148,200; GEF: \$88,000).

*Expected outputs*

- a. Establishment of Inter-institutional cooperative agreements for the exchange of information, and exploration of long-term financing mechanisms for such services, including fee-based;

b. Dissemination of monitoring information and project results through the publication of three issues of the Galapagos Report, a public information campaign using the media and a series of short summaries on specific issues, and

c. Provision of information and methodological support to the participatory planning processes in the Galápagos Islands, including the analysis of such information in relation to key problems for the appropriate management of the Archipelago.

### **Sustainability analysis and risk assessment:**

The continuity of the project activities requires adequate collection of relevant information, appropriate systematization and its use for evaluation processes. But in addition, it is crucial that these activities become part of the planning and policy implementing agencies' administrative routines. To achieve this necessary outcome, the project includes training activities, as well as provision of basic infrastructure (i.e. computers for key institutions). Nevertheless, integration is not easy, and could constitute a risk for project success.

After achieving that "integration", another potential risk is to lose the independence of the evaluation processes. The same institutions that define the policies will have to evaluate them. This could also restrict the public availability of the information. The project will require that, in return for participation in training activities and receipt of infrastructure (computers), participating government agencies would formally commit to ensure public disclosure of information and of program evaluations. These risks will be monitored during project implementation and additional actions (including potentially an external "audit") would be identified and carried out if necessary.

A final risk involves the potential lack of staff and funds in the public agencies to ensure the continuity of the initiative. We expect that, as a result of continuous capacity-building activities and the project transference component (that includes permanent on the job "coaching" and support so that line agency staff learn by doing), sufficient Officers will be trained to sustain the system from the technical side, and MSP activities will become a standard program of the institutions before the end of the Project.

With respect to long-term funding, we expect that government budgetary support will be forthcoming after the MSP is completed, as relevant institutions will adapt their systems during the three years of project implementation. This will be feasible because maintenance costs of the system are lower than the initial costs of establishing the system supported with MSP funding. In addition to regular budgetary support, we also expect that non-GEF international support will continue to be available from sources such as WWF. Potential sources of domestic funding would also be explored during the MSP project period, including the possibility of selective cost-recovery for information services resulting from monitoring activities.

### **Incremental cost assessment:**

The **baseline scenario** for the "Monitoring the Galápagos Islands" Project would comprise a two-phase program carried out over 6 years within the financial resources available to Natura, WWF, and other interested donors and local organizations. Resources available for the overall program would total \$649,200, broken down as follows: (a) fishing impact studies - \$89,000; (b) establishment of a basic monitoring system - \$145,000; (c) tourism related studies - \$57,000; (d) social status questions - \$219,200; (e) strengthening of local capacity - \$64,800; and (f) disseminating information - \$74,200.

The baseline scenario would make possible the establishment of a basic monitoring system, provision of basic information to national, regional, and local organizations, outreach to stakeholders on topics related

to waste management and recycling, and analysis of basic data on public expenditure, census figures, and service provision to the local population. However, under the baseline scenario, funding would not be sufficient to assure that a wide range of biological variables would be adequately monitored, that a broad spectrum of interested stakeholders (e.g., fishing cooperatives, local artisans, farmers and ranchers, tourism guides) could be involved in project activities, that information would be well-diffused and understood, and that program activities would be sustainable beyond the project period.

The **GEF Alternative** would comprise a two-phase program carried out over six years, which would include the additional resources for incremental cost funding from the GEF. The GEF Alternative would allow the establishment of a solid monitoring system to measure the well being of the ecoregions of the Galápagos Islands. The total cost of the GEF Alternative is US\$1,590,550, distributed in the following way: (a) fishing impact monitoring - \$193,000; (b) establishment of a biological monitoring system - \$471,600; (c) tourism impact monitoring - \$187,600; (d) social status monitoring - \$337,900; (e) strengthening of local capacity - \$238,200; and (f) dissemination of information - \$162,200.

The GEF Alternative will allow a much more in-depth monitoring system to be put in place, particularly on biological variables and ecosystem health, than would otherwise have been the case. With respect to social trends, the GEF Alternative will be able to go beyond statistical reviews of demographic indicators, to analyze and better understand the root causes driving population migration patterns. Similarly, local capacity building and training for sustainable maintenance of these monitoring and analytical systems over the long-term are funded at much higher levels under the GEF Alternative, with the objective of ensuring long-term sustainability beyond the project period. Information dissemination and outreach to a much broader array of local stakeholders are also strongly emphasized under the GEF Alternative compared to the Baseline; this emphasis is necessary to satisfy the MSP objectives of promoting full participation of civil society and of building a solid private-public partnership to protect the Galápagos Islands' fragile ecosystem, based on a shared understanding of threats, impacts, and needed actions on the part of each.

The **incremental cost** of the proposed project is US\$941,350. Baseline funding is being contributed by Fundación Natura, WWF and the Charles Darwin Research Station, for a total of US\$649,200 (\$175,000 Phase I and \$474,200 Phase II). Consequently, GEF funding of US\$ 941,350 is requested to cover the incremental costs of MSP implementation.

**INCREMENTAL COST ASSESSMENT (US\$)**

ACTIVITIES	Baseline Scenario	GEF Alternative	Increment (GEF)
Expected outcome 1: Impact of fishing activities	89,000	193,000	104,000
Expected outcome 2: Biological monitoring system	145,000	471,600	326,600
Expected outcome 3: System to monitor tourism	57,000	187,650	130,650
Expected outcome 4: Monitoring social status	219,200	337,900	118,700
Expected outcome 5: Strengthening local capacity	64,800	238,200	173,400
Expected outcome 6: Flow of information	74,200	162,200	88,000
<b>TOTAL</b>	<b>649,200</b>	<b>1,590,550</b>	<b>941,350</b>

**Budget**

The total cost of the MSP (Phase II) activities is estimated at \$1.4 million, of which the MSP proposers and partners would provide approximately one-third of needed project financing, and GEF would provide about two-thirds, corresponding to incremental costs. A breakdown of MSP project costs by expected outcome and by financier is provided below.

**MSP BUDGET BY OUTCOMES (US\$) (Phase II)**

	GEF	WWF	Natura	ECChD	TOTAL
Expected outcome 1: Impact of fishing activities	104000	15000		62000	181000
Expected outcome 2: Biological monitoring system	326600	45000		75000	446600
Expected outcome 3: System to monitor tourism	130650	20000		15000	165650
Expected outcome 4: Monitoring social status	118700	68000	79200		265900
Expected outcome 5: Strengthening local capacity	173400	15000	19800		208200
Expected outcome 6: Flow of information	88000	19500	40700		148200
<b>TOTAL</b>	<b>941350</b>	<b>182500</b>	<b>139700</b>	<b>152000</b>	<b>1415550</b>

**Implementation Plan:**

Fundación Natura will execute the Project, and will call on technical assistance provided by WWF. Fundación Natura will contract the technical staff for coordination and implementation, and WWF will provide a part-time Senior Officer responsible for technical support, fundraising, coordination of specialized technical staff (including consultants) and international relations (exchanges, information collection from other experiences, etc.). A summary Implementation Table is provided below. A detailed Implementation Plan is being developed, which will identify participating institutions and stakeholders and their respective responsibilities and roles, as recommended in the Technical Review by the expert from the STAP Roster.

ACTIVITY	MONTHS	OBSERVATIONS
a. Information collection and targeted research.	36	The collection of information will be maintained throughout the three years of the project.
b. Systematization of information; database and GIS development.	12 (first year)	The GIS/database design will be done during the first 12 months. Thereafter, implementation will consist of maintenance, training and updating.
c. Dissemination and methodological support.	12 (second year)	
d. Training and organizational development.	36	Training activities will take place throughout the three years of the project, but the emphasis in Year 3 will be on transference of the system to the long-term “owners”.

### Public Involvement Plan:

#### *Stakeholder Identification*

The principal institutions that will be involved in this project are: Galápagos National Park; INGALA (Galápagos National Institute), Charles Darwin Research Station; Local Municipalities; Local and national-level Government; Ministries of Health and Education; Undersecretary for Fisheries; Navy, and local organizations (Fishing Cooperatives, Tourist Guides Associations, local recycling groups, farming and ranching associations, and artisan associations).

#### *Participation*

Participation of local institutions and NGOs will be achieved through the following strategies: a) participatory design of evaluation instruments (databases, GIS, indicators for policy monitoring). This way the methodology will be adapted to their requirements and capacities, b) demonstrative meetings on analysis and use of the available information, showing its utility in practical terms, c) wide distribution of information, supporting the on-going planning processes in the Galápagos, (Marine Reserve Management Plan, Participatory Management Plan of the San Cristóbal Municipality).

Continuing with the model defined by the agreement for the design and implementation of the Galapagos-GIS, understandings with both government and non-government organizations related to MSP activities will be formalized through the use of MOUs or similar instruments, ensuring long-term commitment of the relevant agencies and NGOs, beyond more personal decisions of temporary Officers.

### Monitoring and evaluation plan:

Detailed performance benchmarks are being developed to complement the overall project objectives, outcomes, and activity indicators presented in the MSP summary sheets. These performance benchmarks will provide the basis for disbursement of GEF funds by the Bank during MSP implementation. Natura will report regularly to the Bank on project execution. In addition to regular monitoring, an external evaluation will be contracted at the end of the three years of the project to assess overall performance and achievements, and to analyze prospects for long-term project continuity and follow-up.

### Project checklist:

<b>PROJECT ACTIVITY CATEGORIES</b>	<b>TECHNICAL CATEGORIES</b>
<b>BIODIVERSITY</b>	
Prot. Area zoning/mgmt :	Institution Building : x
Buffer zone development :	Investments:
Inventory monitoring: x	Policy Advice: x
Ecotourism:	Targeted Research: x
Agro-biodiversity :	Technical/Management Advice: x
Trust fund (s):	Awareness/Information/Training: x
Benefit Sharing:	Other:
Other:	

## TECHNICAL REVIEW

### Ecuador: Monitoring the Galápagos Islands

#### 1. Assessment of the Scientific and Technical Soundness of the Project:

The Project has a good technical and scientific proposal. It focuses the critical areas that should be monitored in order to achieve a better understanding of the conservation and management problems in Galapagos Island. The specific objectives are clearly defined and seem plausible to reach in the proposed time span of the project.

The methods described to fulfill the project objectives are well articulated amongst themselves creating thus a firm proposal which gives the project a good chance for a successful result. The combined effort of Fundación Natura, Charles Darwin Foundation, and the World Wildlife Fund permits the assumption that a specialized and reliable team will be in charge of the project.

#### 2. Identification of the Global Environmental Benefits resulting from the Project:

The information obtained from this project will also serve to learn the climate change effects in oceanic ecosystems.

#### 3. Evaluation of the Project's Compliance with GEF Objectives, Operational Strategy and Guidance in the Biodiversity Focal Areas:

The project proposed is within the scope of the coastal, marine and freshwater ecosystems of the Global Environment Facility's Operational Program.

#### 4. Assessment of the Project's Significance, and Potential Benefits:

For many years it has been documented through different sources the negative impact that human activities cause in the Galapagos Islands. Yet there has been little or none scientific data to support these negative remarks. Without a clear and precise identification of the impact the human activities cause to the ecosystem it is very difficult almost impossible to employ effective mitigation measures according to the social and environmental reality of the Archipelago. This project is aimed to correct these deficiencies and to begin a disciplined monitoring system which will provide the necessary data to support the decision making process to properly address the social and environmental management issues affecting the Galapagos Islands.

#### 5. Potential Replicability of the Project to other Sites:

The model suggested in this proposal could be followed in other similar cases in which the conflict between conservation and development is present. Machalilla and Cayambe Coca national parks in Ecuador are facing a similar social and environmental management problems. The experience gained at the Galapagos Islands will certainly serve as a model to be followed when planning the management of both areas.

Various protected areas in other countries are facing similar management problems too. The Juan Fernandez Archipelago National Park in Chile is suffering from over-fishing, overgrazing and urban



encroachment which impact severely on the sensitive ecological systems of the Archipelago. Isla Saona in Del Este National Park in the Dominican Republic is under an extreme impact caused by excessive tourism, over-fishing and a urban resident population. As in the Galapagos Islands these national parks in Chile and the Dominican Republic lack the reliable monitoring system which is the base for making effective resource management decisions. The Galapagos approach is a very important initiative to guide the establishment of similar monitoring programs in the countries mentioned above.

6. Estimation of the Project's Sustainability in Institutional, Financial and Technical terms:

The combined efforts of Fundacion Natura, the World Wildlife Fund and Charles Darwin Foundation to deal with the ecological threats affecting the island is not new. These organizations begun working together a long time ago in the islands and they will continue this joint strategy beyond this project. The participation of local authorities and organized private local groups is an additional component ,to this project, which will support its institutional sustainability.

The budget presented is consistent with the activities proposed. It covers all the items needed to accomplish the objectives, and the amounts seem reasonable considering the task to be undertaken.

Technically speaking the training of interested local organizations and then the transferring of the monitoring system on to them is the right approach to achieve a long term commitment to keep the monitoring system working for the benefit of themselves and therefore for the island's biological diversity.

7. Extent to Which the Project will Contribute to the Improved Definition and Implementation of the GEF's Strategies and Policies:

This project is a clear contribution to the achievement of the objectives of the GEF due to the fact that it presents a strategy for the conservation and sustainable use of freshwater, coastal and marine ecosystems.

8. Evaluation of Relevant Linkages to Other Focal Areas (Biodiversity Conservation, Climate Change).

This project is additionally relevant with two worldwide environmental conventions in which Ecuador is a signatory country.

It is accordant to Article 5 of the Convention on Climate Change which states that all signatory countries will support programs or international organizations that have as prime objective data collecting as well as any efforts made by organizations to reinforce the systematic observation, capacity, and national resources of scientific and technical research.

The project proposal is also consistent with Article 25 of the Convention on Biological Diversity which states that all organizations participating in this convention should grant scientific and technical evaluations of the biological diversity state in the countries and of the effects of different adopted measures according to the Convention. The organizations forming part of the Convention should also identify the most recent and efficient technologies and information relevant to the project, lend assistance on scientific programs and international cooperation on the subject, and finally answer questions of scientific, technical, methodological, and technological character.

9. Degree of Involvement of Relevant Stakeholders in the Project:

As mentioned in the proposal stakeholders will have a range of involvement. The project will count with participatory design of evaluating instruments such as databases and GIS, which will permit the methodology to be adapted to stakeholder's requirements and capacities. The project also proposes demonstrative meetings on analysis and use of the available information, and finally a wide distribution of information supporting the on-going planning processes in the Galapagos Islands.

10. Role, Potential and Importance of Capacity Building Elements of the Project:

The project will play an important role in the island's environmental growth since it has the potential of improving and strengthening the local institutions through training and the providing of basic infrastructures to these, giving place to the bettering of local institutions enabling them to continue with the management of this project after the three years training period is over.

11. Project's Innovations in Terms of Approach and Implementation:

The innovation of the project is that it has a new form of approach in which it utilizes all its capacities to the improvement of the local organizations through training. Thus creating more efficient organizations allowing the locals to deal with the environmental problems affecting the Galapagos Islands.

12. Conclusions

In general I found this is a well articulated project proposal which is consistent with the GEF Operational Policies and is badly needed to improve the strategies to deal with the environmental and social problems impacting the Galapagos Islands. It is encouraging to see the strengthening of local capacities to solve local problems. A clear identification of which organizations will be responsible for carrying out every element of the monitoring system would be useful to augment the quality of this project proposal.