

GALAPAGOS ENVIRONMENTAL MANAGEMENT PROGRAM

(EC-0134)

EXECUTIVE SUMMARY

Borrower and guarantor:	Republic of Ecuador	
Executing agency:	The Ministry of the Environment, through the Dirección del Parque Nacional Galápagos (DPNG) [Galapagos National Park Directorate] and with the participation of the Charles Darwin Foundation, the Servicio Ecuatoriano de Sanidad Agropecuaria (SESA) [Ecuadorian Agricultural Health Service] and the Municipalities of Puerto Ayora, Puerto Baquerizo Moreno and Puerto Villamil.	
Amount and source:	IDB (OC/IFF):	US\$10.4 million
	Local:	<u>US\$ 2.6 million</u>
	Total:	US\$13.0 million
Terms and conditions:	Amortization period:	25 years
	Grace period:	4 years
	Disbursement period:	4 years
	Interest rate:	variable
	Inspection and supervision:	1%
	Credit fee:	0.75% per annum on the undisbursed balance
	Currency:	U.S. dollars from the Single Currency Facility
Background:	The Galapagos Archipelago lies 1,000 km off Ecuador's coast and is composed of 15 islands and 115 islets which together cover 7,882 km ² of land and a marine area of 140,000 km ² . These islands contain some of the most outstanding marine and land ecosystems in the world. Their considerable distance from the mainland has allowed unique ecological conditions to evolve that are extremely favorable for the development of a number of exclusively native species.	

The marine and land ecosystems are threatened by economic activities closely related to an influx of people from the mainland, particularly tourists and fishermen. Tourism is the main economic activity in the archipelago, employing close to 40% of the economically active population and earning about US\$100 million a year for the Ecuadorian economy. This activity has not been exempt from conflict. While some tour operators consider that restrictions on investments in tourism infrastructure on the islands have narrowed their development prospects, the scientific community and conservationists have viewed with concern the impact of tourism, which brings increasing numbers of people from the mainland, placing additional pressures on the island ecosystems.

The fishing industry has burgeoned since the 1980s, thanks to the rise of fisheries (not always legal) for species with high commercial value, a development which has prompted a transition from a subsistence fishery to a commercial fishery that sells on markets in continental Ecuador and abroad. The environmental and social impacts of this activity include heavy pressure on certain stocks such as lobster and sea cucumber, a reduction in biodiversity owing to by-catch and the persistence of conflicts in relatively small communities.

The influx of people into the archipelago as a result of tourism and fishing has also affected the unique and fragile balance of the different island ecosystems, through the introduction of exotic species.¹ The consensus is that the main threat to native biodiversity comes from the exotic species introduced into the archipelago.

As for the socioeconomic situation, explosive population growth in the Galapagos (the highest in the country at 6.7% a year) has aggravated shortcomings in urban and provincial planning. Demand for basic services cannot be adequately met by the agencies responsible for building environmental sanitation infrastructure and providing other public services. The most critical areas are potable water, sewerage and solid waste management.

¹ These species are considered exotic since they do not form part of the archipelago's original biodiversity. They include goats, donkeys, pigs, rats, and plant species introduced by humans from the mainland. A large part of the native biodiversity of the Galapagos is endemic, in that most of it cannot be found anywhere else in the world.

To address these problems, the country as a whole has developed policies and strategies to promote the conservation of the archipelago's unique ecosystems and the sustainable use of its natural resources. In 1998, the Ecuadorian government promulgated a Law establishing the Special Regime for the Conservation and Sustainable Development of Galapagos Province, which places restrictions on immigration and the use of its ecosystems. The law declared the archipelago's marine zone to be a protected area and gave it the status of a marine reserve. As a result, fishing was restricted to just certain zones in the Galapagos Marine Reserve (RMG) and was limited exclusively to in-shore fishermen. The Ministry of the Environment is responsible for administering the RMG through the Galapagos National Park Directorate (which also administers the land area of Galapagos National Park covering 97% of the islands). Policy decisions on management of the RMG are the responsibility of the Autoridad Interinstitucional de Manejo de la Reserva (AIM) [Inter-Agency Reserve Management Authority], which is chaired by the Ministry of the Environment. Policy decisions take into account the recommendations of the Junta de Manejo Participativo de la Reserva (JMP) [Participative Reserve Management Board], a body composed of legally-organized groups of users of the RMG, including representatives of the fisheries and tourism sectors, the scientific community and the Galapagos National Park Directorate.

Despite this progress and given the magnitude and complexity of the tasks that must be undertaken for effective management of the resources and ecosystems in the RMG, a series of obstacles that interfere with protection of marine and coastal biodiversity need to be addressed and sustainable use of its resources promoted. In particular, embryonic institutional development for managing the RMG, insufficient coverage to halt illegal fishing and serious shortcomings in emergency surveillance and response systems have been identified. Capacity for settling disputes arising from competition for shared resources is weak and there are major limitations on the development and generation of scientific information for managing RMG resources and ecosystems.

The prospects for undertaking a successful program for management of the Galapagos Marine Reserve are particularly bright at present. Passage of the Law establishing the Special Regime for the Galapagos, significant progress in participative management of the reserve, and a strengthened regional structure for conservation and sustainable development of the archipelago are some of the features of the new scenario. This progress is an essential part of building a new environmental management model that will promote shared responsibility for making and implementing decisions on the use of natural resources, providing basic services that will be financially sustainable, and contributing to the decentralization process under way in the country.

Objectives: The general objective of the program is to reverse the process of environmental degradation in the Galapagos Islands. The specific objectives are: (i) to support effective implementation of the management plan for the RMG in order to help conserve the marine and coastal ecosystems and allow for the sustainable use of their resources; (ii) to complement efforts to reduce the introduction and spread of exotic species, pests and diseases that threaten the archipelago's native biodiversity; (iii) to strengthen coordination capacity and develop the environmental management mechanisms of the DPNG, the Participative Reserve Management Board, the Inter-Agency Reserve Management Authority and Galapagos municipalities; and (iv) to lay the groundwork that will enable the Galapagos municipalities to gain access to financing for environmentally-friendly potable water, sewerage and solid waste management services.

Description: The program will cost an estimated US\$13 million, with the Bank financing the equivalent of US\$10.4 million. Four subprograms are proposed: (1) support for management of the Marine Reserve; (2) inspection and quarantine; (3) institutional coordination and management; and (4) basic sanitation studies and emergency works.

1. Marine reserve management (US\$6 million)

This subprogram seeks to set the RMG management plan in motion in order to implement and maintain over time a series of integrated activities that contribute to the sustainable use of natural resources and conservation of the marine coastal environment within the RMG. The following components are planned:

a. Natural resource management (US\$1.4 million)

The program will support DPNG in establishing a unit for marine zoning, finance short-term consulting services on zoning methods

used in other protected marine areas, and boost capacity for reaching and complying with agreements on managing RMG resources.

b. Maritime security and control (US\$3.2 million)

An integrated maritime security and control system will be established for early detection of and rapid response to emergencies at sea and violations of the rules governing the use of resources and other regulations. To establish the system, the program will finance the procurement and installation of a portable radar station and three fixed stations, satellite positioning equipment to detect ships operating in the reserve and four command and control posts equipped with the minimum facilities needed to house and operate the network. The Galapagos National Park Directorate marine surveillance capacity will be improved through the purchase of four speedboats (for coastal patrols) and an ocean-going boat, complementary field equipment and storage facilities, and a decompression chamber will be built.

c. Environmental education, communications and training (US\$500,000)

The program will support activities to heighten public awareness, and to improve formal and informal education, inter- and intra-sector communications and the organizational development of user groups. It will also create capacity in the DPNG. Fishing cooperatives, shipbuilders' associations and tourism operators, women's and youth groups and other grass-roots organizations will receive technical assistance in building a shared vision of a community that is responsible for managing its fisheries resources.

d. Research and monitoring (US\$900,000)

The program will support three types of research and monitoring activities that will: (i) create capacity in the DPNG to carry out the tasks of planning, coordinating and supervising research activities; (ii) conduct priority research that is consistent with the management plan for the RMG, including establishment of a baseline for marine biodiversity, evaluation of commercial fish stocks, analysis of the impact of by-catch and an evaluation of the condition of visitor sites at the marine reserve; and (iii) design and establish a cost-efficient program for monitoring biological, social and economic indicators, including diagnostic studies and alternatives for controlling migration to the islands by applying the Special Regime Law.

2. Inspection and quarantine (US\$1.8 million)

Inspection and quarantine control will be supported to prevent the entry and spread of exotic species, pests and diseases from one island to another. Small works will be constructed or adapted at airports and ports on the islands of Baltra, Santa Cruz, Isabela, San Cristóbal and Floreana.

The main buildings at the airports on Baltra and San Cristóbal will be upgraded and a building that will serve as the base of operations of the Galapagos inspection and quarantine system will be built at Puerto Ayora. Inspection rooms and municipal offices will be built at the municipal docks on the three islands.

3. Institutional coordination and management (US\$700,000)

The coordination capacity of the institutions involved in the management and protection of the Galapagos islands will be strengthened and management mechanisms will be developed in them. The Ministry of Environment's Galapagos Islands Coordination Unit (UCIGAL) will be strengthened, as will Instituto Nacional de Galápagos [Galapagos National Authority]. Capacity will be built up in the Galapagos National Park Directorate to manage the protected marine area and in the Participative Reserve Management Board to optimize its process of consultation and agreement and joint decision making. The municipalities' capacity to deliver basic services² will be developed in order to create conditions that would allow municipalities to have access to other sources of financing such as the IDB and other donors.

4. Environmental sanitation studies and emergency works (US\$1 million)

Feasibility studies and engineering designs will be prepared for the rehabilitation and upgrading of potable water, sewerage and wastewater disposal systems in the towns of Puerto Baquerizo and Puerto Villamil. The emergency works would be carried out in three municipalities and include repair of distribution tanks and chlorination systems, the main supply pipes and pumping stations.

² At present, the Bank is supporting institution-building activities for those municipalities. The activities include: (i) support for the preparation of strategic plans; (ii) provision of planning tools and basic equipment (preinvestment loan 919/SF-EC); and (iii) preliminary support for boosting the capacity to manage basic services and obtain loans (TC-00-06-02-5 EC).

Programs for the reduction, reuse and recycling of solid waste from ships and tourism operations will be financed and a program will be established to reship recyclable waste such as cardboard, glass, metal, oil and plastics to the mainland.

**The Bank's
country and
sector strategy:**

The Bank's strategy in Ecuador has four objectives: (i) to halt and reverse economic deterioration; (ii) to lay the groundwork for sustained growth; (iii) to alleviate poverty permanently and improve income distribution; and (iv) to promote the efficient use of natural resources and environmental protection. The present project corresponds to objective (iv) and is closely related to objectives (ii) and (iii).

The proposed program supports the strategy by: (i) promoting the conservation of marine and coastal ecosystems in the Galapagos, preserving biodiversity on land and generating environmental benefits by reducing pollution of island aquifers; (ii) contributing to the institutional development of local governments on the islands; and (iii) preserving an important source of income for the local and national economies by supporting the sustainable use of marine and coastal resources and improving the pool and quality of human capital in the archipelago.

**Environmental
and social
review:**

Profile II and the ESIB were approved by CESI/TRG on 31 October 1997, and the project report was approved on 22 September 2000. Since the components are intended to reverse or control environmental degradation in the archipelago, the overall environmental impact of the project will be favorable. The subprogram for management of the RMG will generate important environmental benefits through better protection of habitats and marine and coastal species. The combined effects of the zoning plan, full registration of fisheries with restricted access, and the participative management and control mechanisms will help the fish stocks to recover, reduce by-catch and ease pressure on fragile ecosystems such as coral reefs, shoals and mangrove swamps. The inspection and quarantine subprogram will also have environmental benefits in terms of protecting land, coastal and marine biodiversity of global importance since it is so highly endogenous. Preparation of studies for the delivery of environmental sanitation services (solid waste management, water supply and sewer systems and wastewater treatment) will help to create positive environmental impacts when the works are in operation.

Benefits:

The program will create social benefits through more effective participation by RMG user groups in decision making and by easing inter-sector conflicts (particularly between in-shore fishermen and tourism operators). The environmental education activities, which will

strengthen the islanders' cultural identity and social fabric, will also bring social benefits. The environmental sanitation component will create substantial social benefits in terms of better public health.

The program will also generate economic benefits linked to improving and maintaining the condition of the resources on which the Galapagos economy is based. Suitable protection for the marine and coastal ecosystems will permit the tourism industry to continue offering attractions for visitors to the archipelago, who would be willing to pay higher fees to visit the RMG if its management and protection were assured. Establishment of the reserve will also increase the income of in-shore fishermen in the long run as key fish stocks recover. Other benefits include creating conditions conducive to improving the delivery of basic sanitation services and generating technical capacity and financial resources to fund construction of future infrastructure works.

Risks:

Risk: The interests of certain users of the Galapagos Marine Reserve may lead them to resist the change to a participative management system that places greater emphasis on resource conservation rather than free exploitation. **Attenuating factors:** Support is being provided for fuller participation by in-shore fishermen in decisions affecting the reserve and support will be provided for alternative economic activities to the fishery.

Risk: The host of cooperation and financing initiatives to protect Galapagos ecosystems and promote the sustainable use of its natural resources creates the risk that efforts and resources might overlap and make it difficult to achieve complementarity and synergies among the different initiatives. **Attenuating factors:** As part of the program's institutional strategy, a permanent unit (UCIGAL) is being consolidated within the Ministry of the Environment and will take charge of coordinating the different actions to benefit the archipelago.

Special contractual clauses:

1. Special conditions precedent to the first disbursement

- a. Creation of the program administrative and financial management unit (UGAFIP) and appointment of the unit's chief (paragraph 3.2).
- b. Hiring of a specialized agency to assist with contracting and procurement (paragraph 3.2).
- c. Signature of the following agreements: (i) co-execution agreement between the Galapagos National Park Directorate and the Charles Darwin Foundation (paragraph 3.9); and (ii) framework agreement between the Galapagos National Park

Directorate and the Ecuadorian Agricultural Health Service to operate and maintain the Galapagos inspection and quarantine system (paragraph 3.10).

- d. Establishment of an office of the Ecuadorian Agricultural Health Service in the Galapagos (paragraph 3.10).

2. Condition precedent to the disbursement of funds for strengthening the municipalities and performing emergency sanitation works

- a. Signature of agreements with each municipality for execution of the activities envisaged under this component (paragraph 3.14).

3. Conditions during execution

- a. Annual program follow-up and monitoring meetings (paragraphs 3.31 and 3.32).
- b. Within the first 90 days of each financial year, evidence is to be presented to the Bank that the local contribution has been budgeted and funds have been set aside solely for the purpose of financing it. The Bank's nonobjection will also be required for new investments totaling more than US\$500,000 annually, financed from the revenue from the entrance fees paid by visitors to the Galapagos National Park.

Poverty-targeting and social sector classification:

This operation does not qualify as a social equity-enhancing project, as described in the indicative targets mandated by the Bank's Eighth Replenishment.

Exceptions to Bank policy:

None

Procurement:

Goods and services will be procured and works will be contracted in accordance with Bank procedures. International competitive bidding will be compulsory for procurements of goods and services costing more than US\$250,000 and for construction contracts over US\$2 million. Consulting services will be contracted in accordance with Bank procedures.

I. FRAME OF REFERENCE

A. Recent economic situation

- 1.1 Ecuador's economy shrank by 7.3% during 1999 as a result of the deep financial and exchange crisis in the country. The economic decline, which began in the second quarter of 1998, worsened in 1999. Uncertainty, high interest rates, the financial crisis and the freezing of bank deposits led to a sharp drop in domestic demand which translated into a significant reduction in imports (38%), investments (35%) and private and public consumption (10% and 13% respectively).
- 1.2 Inflation, which was relatively under control at the end of 1999 (60% a year), soared in the first half of 2000 to over 100% as a result of the response by prices to the high exchange rate of the sucre to the US dollar decreed by the government to launch the process of dollarization of the economy. However, prices are expected to rise more slowly in the coming months. In the medium term, once the effects of the dollarization process are fully felt, prices and their growth are expected to align around those in the United States economy.
- 1.3 During 1999, depreciation of the sucre made foreign debt service difficult and at the end of the year, the government defaulted on interest payments to private creditors. However, when dollarization of the economy is completed and as a result of successful negotiations to reduce and restructure the debt with bond holders and the Paris Club, a more favorable outlook is expected regarding the debt burden.¹ The recent signature of an agreement with the IMF² was one of the key elements in winning a better negotiating margin for the country, particularly now that the IMF, the IDB, the World Bank and the Andean Development Corporation (CAF) have announced that they will jointly lend US\$2.045 billion over the next three years to support reforms and the recovery of the Ecuadorian economy. Support from multilateral lending agencies comes in response to Ecuador's commitment to carry out a series of reforms linked to the introduction of dollarization, adequate management of the financial crisis, more attractive conditions for private investment in public companies and greater labor flexibility.

¹ On 14 August 2000, Ecuador reached a debt restructuring agreement with holders of Brady and Eurobonds. The terms include a reduction of 40% in the principal, valued at US\$6.46 billion. This implies a reduction of about US\$2.6 billion in the foreign debt with private creditors, freeing up an additional US\$1.5 billion for the national budget. In September 2000, Ecuador reached an agreement with the Paris Club to restructure its US\$1.3 billion debt to that organization.

² Ecuador's Letter of Intent with the IMF envisages economic growth of between 0% and 1% in 2000, a reduction in the nonfinancial public sector deficit to 3.9% of GDP and annual inflation at the close of the year between 55% and 60%.

B. The situation in the Galapagos Archipelago

- 1.4 The Galapagos Archipelago lies 1,000 km off Ecuador's coast and is composed of 15 islands and 115 islets which together cover 7,882 km² of land representing 97% of the protected land area and a marine area of 140,000 km². These islands contain some of the most outstanding marine and land ecosystems in the world. Their considerable distance from the mainland has allowed for unique ecological conditions that are extremely favorable for the development of a number of exclusively native species. The convergence of sea currents around the archipelago has been particularly favorable for the development of ecosystems that are rich in terms of biodiversity and complexity. They contain a wealth of fishes and offer incomparable opportunities for tourism based on the recreational observation of the plants and animals that prosper on these volcanic islands.
- 1.5 The Archipelago's singular nature, which has been recognized since Charles Darwin visited the area, led to the establishment of the Galapagos National Park in 1959 and subsequent declarations of Natural Heritage of Humanity (1979), Biosphere Reserve (1984), Marine Resources Reserve (1986), and Whale Sanctuary (1990). The Galapagos land park has received much attention giving it a significant level of development. Three management plans have been prepared for the park since 1974, the latest one being approved in 1996. The government's efforts, with the help of the international community, have made it possible to keep in place a management program for this protected area considered one of the finest examples of its kind in Latin America.
- 1.6 The socioeconomic situation on the archipelago is not immune from the impact of the economic cycles and social repercussions in the rest of the country. Although the standard of living of islanders is comparatively higher than on the mainland (e.g. the poverty rate is 18.8% compared to 58.4% nation-wide), it is no less true that the deepening economic crisis in the country has been felt in the social regression in Galapagos in the last two years.
- 1.7 A reduction in public investment in the archipelago from US\$589 per capita in 1997 to US\$358 in 1998 has meant that in some cases growth in the provision of public services is lower than population growth on the islands (e.g. electricity 3% vs. population growth of 6.7%). In other cases, services have evolved even more unfavorably, such as potable water, whose coverage was 82% in 1990 but fell to 80% in 1998, with service that was unsatisfactory in quality and quantity. Other services have made significant progress in comparison with 1990, particularly sewerage and telephones. However coverage in 1998 continued to be very low (35% and 21%, respectively).
- 1.8 High population growth in the archipelago is the consequence of large numbers of immigrants from the mainland. Migration has increased to the point where 75% of people living in the Galapagos, whose population is an estimated 16,000, do not

originally come from the islands, according to the most recent housing and population census (1998). Censuses indicate that the population has grown steadily at an annual rate of: 4.5% between 1962 and 1974, 4.9% between 1974 and 1982, 5.9% between 1982 and 1990, and 6.7% between 1990 and 1998.

- 1.9 Marine and land ecosystems are threatened by economic activities closely related to migration, particularly tourism and the fishery. The archipelago has experienced substantial changes in the last 20 years. In the 1970s and 1980s, the growing opportunities for tourism development were a strong incentive for migration. In the 1990s, the sea cucumber, lobster and shark fisheries were keys in attracting thousands of people from mainland Ecuador.
- 1.10 Tourism is the archipelago's main commercial activity and it employs close to 40% of the economically active population. The number of cruises, flights and inbound tourists has grown steadily each year over the last decade. While 42,000 tourists visited the islands in 1988, in 1998 the figure had risen to 64,700. The value of tourism for Ecuador's economy is an estimated US\$100 million a year.
- 1.11 The tourism industry has not been exempt from conflict. While some tour operators consider that restrictions on investments in tourism infrastructure on the islands have narrowed their development prospects, the scientific community and conservationists have looked with concern on the impact of tourism, which brings increasing numbers of people from the mainland, placing additional pressures on the island ecosystems.
- 1.12 The fishing industry has burgeoned since the 1980s, thanks to the rise of fisheries (not always legal) for species with high commercial value, which has prompted a transition from a subsistence fishery to a commercial fishery that sells on markets in continental Ecuador and abroad. The export markets for sea cucumber and shark fins (an illegal fishery) that arose in the 1990s have rekindled expectations for the fishery, to the point where there has been steady growth in the number of fishermen since the start of that decade.³ The environmental and social impacts of this activity include heavy pressure on certain stocks such as lobster and sea cucumber, a reduction in biodiversity owing to the by-catch and the persistence of conflicts in relatively small communities. Fishermen fail to respect the quotas allocated by the authorities and there have been frequent cases of illegal fishing in protected waters by unauthorized vessels.
- 1.13 The exercise of these two economic activities has been accompanied by the loss of human life, particularly from diving and boating accidents. Over the last two years nine people lost their lives and another five disappeared during the sea cucumber

³ While there were an estimated 400 local fishermen in 1992, the figure had almost doubled by 1998. Source: PNG/FCD.

fishing season, affecting 140 fishermen and residents. There were seven accidents involving tourists and four fatalities.

C. The Galapagos Marine Reserve

- 1.14 With passage of the Law establishing the Special Regime for the Conservation and Sustainable Development of Galapagos Province (1998), the Forestry, Natural Areas and Wildlife Act was amended to establish the category of marine reserve, as part of the heritage of protected natural areas. The marine and coastal area of the archipelago was classified as a marine reserve. The Ministry of the Environment was made responsible for administering the reserve through the Galapagos National Park Directorate (DGNP) (which also administers the land portion of Galapagos National Park that covers 97% of the islands). Policy decisions on management of the Galapagos Marine Reserve (RMG) are the responsibility of the Inter-Agency Reserve Management Authority, which is chaired by the Ministry of the Environment. Policy decisions take the recommendations of the Participative Reserve Management Board into account, which is a body composed of legally-organized groups of users of the RMG, including representatives of the fisheries and tourism sectors, the scientific community and the DGNP.
- 1.15 The law contains different articles that define acceptable fishing practices and the people who are allowed to participate in that activity. The right of access to the fishery in the RMG is granted exclusively to permanent residents of the Galapagos, who are registered as members of a fishing cooperative, and their descendents, and they are limited to the in-shore fishery. The law includes a ban on industrial fishing in the archipelago, intended to protect marine biodiversity in the area. It also establishes mechanisms to ensure that some of the proceeds from entrance fees to the RMG are used for conservation initiatives there.⁴
- 1.16 New controversies and conflicts have grown up over the rule that only in-shore fishermen can operate in the RMG. The industrial fishery, particularly the tuna fleet, is against the restriction and also opposes the new boundary of the RMG which the Special Law extended from a 15-mile limit to a 40 mile-limit, with the zone now covering 140,000 km².
- 1.17 Nor has the in-shore fishery has been immune from controversy over the new rules of the game for managing the marine resources of the RMG, particularly regarding sea cucumber and lobster. One example is the conflicting reactions of in-shore fishermen to the quotas and length of the sea cucumber season and to the poor results of the lobster fishery in 1998.⁵ While the cooperatives on Isabela Island have

⁴ Under the law, the proceeds from entrance fees are distributed as follows: Galapagos National Park 40%, Galapagos municipalities 20%, the provincial council 10%, the RMG 5%, the National Protected Areas and Wildlife Authority (INEFAN) 5%, the Galapagos National Authority (INGALA) 10%, the Galapagos inspection and quarantine system (SICGAL) 5%, and the Ecuadorian Navy 5%.

⁵ In 1998, the lobster catch was 37 tons, while it was 61 tons in 1997.

asked to have the fishing season extended, other groups of fishermen, mainly from Santa Cruz, have called for the agreements to be respected and, in the case of the lobster fishery, they have proposed a ban until the stock recovers.

- 1.18 The impact of these activities on other users of the RMG is not well enough understood yet, although it is estimated that marine and deep-sea tourism activities, scientific research and support for navigation and maneuvers are, in general, more localized and susceptible to monitoring than the fishery.
- 1.19 These aspects are dealt with in the new management plan for the reserve, whose goal is to “protect and conserve the marine and coastal ecosystems and their biological diversity for the benefit of humanity, local populations, science and education”. The new plan is a modified version of the 1992 management plan and is the result of a highly participative process that takes account of the views and aspirations of different users of the reserve and of the institutional and legal changes that took place between 1992 and 1999. Some progress has been made in implementing the plan, particularly with regard to zoning of the RMG, development of supporting legislation, application of some joint resolutions agreed to by users of the reserve, mobilization of resources for control and surveillance during the fishing season and conceptual advances in the approach to environmental education for protected areas.
- 1.20 Despite this progress and given the magnitude and complexity of the tasks that must be undertaken for effective management of the resources and ecosystems in the RMG, a series of obstacles that interfere with protection of marine and coastal biodiversity need to be addressed and sustainable use of its resources must be promoted. In particular, embryonic institutional development for managing the RMG, insufficient coverage to halt illegal fishing and serious shortcomings in emergency surveillance and response systems have been identified. Capacity for settling disputes arising from competition for shared resources is weak and there are major limitations on the conduct and generation of scientific information for managing RMG resources and ecosystems. There is also insufficient capacity to educate, train and publicize specific issues relating to protection and use of the RMG.

D. Exotic species

- 1.21 Migration to the archipelago prompted by tourism and the fishery has affected the unique and fragile balance of the different island ecosystems, mainly through the introduction of exotic species. The extreme isolation in which the different plant and animal species evolved on the islands and the lack of major predators means that native species have developed very rudimentary defense mechanisms compared to the species introduced from the mainland. The local, national and international scientific communities agree that the greatest threat to native biodiversity comes from those exotic species. It is estimated that about 460 species

of exotic plants, 25 species of vertebrates and hundreds of invertebrate species have been introduced.

- 1.22 The biodiversity of the archipelago is important to the whole world. The islands are home to 541 species of vascular plants, 106 species of vertebrates and over 1,995 species of invertebrates. An exceptionally high percentage of those species are native: 42% of the vascular plants, 67% of land vertebrates and 20% of the 2,584 species of fish, algae and marine invertebrates.
- 1.23 The fragility of the land biodiversity is linked to the dynamics of the marine biodiversity, particularly with respect to land species on the coast whose trophic support comes directly from the ocean. Therefore changes (human-induced and others) that impact the population dynamics of marine resources have an effect on the balance of species in the coastal zone. Accordingly, suitable management of the archipelago's marine resources is closely linked to conservation of land biodiversity and to the preservation of the islands' largest biodiversity in terms of variety and abundance – its marine species.
- 1.24 Inadequacies in the management of the RMG, which is intended to guarantee the survival of land and marine biodiversity are aggravated by the limitations of the Servicio Ecuatoriano de Sanidad Agropecuaria (SESA) [Ecuadorian Agricultural Health Service]. It does not have sufficient human or operating resources, equipment or facilities to carry out its inspection and quarantine duties in the archipelago. The Galapagos inspection and quarantine system has been established in response to the exceptional conditions on the islands and steps are being taken to establish a SESA office in the archipelago. The entrenchment of a permanent inspection and quarantine system largely depends on activating that office. By law, SESA is required to discharge these responsibilities and to strengthen the inspection and quarantine inspection system for the Galapagos.

E. Population growth and the supply of services

- 1.25 Explosive population growth in the Galapagos – the highest in the country (6.7% a year) – has aggravated the shortcomings in urban and provincial planning. Rising demand for basic services has not been met adequately by the institutions responsible for environmental sanitation infrastructure and other public services in the archipelago. The most critical areas are potable water, sewerage and solid waste management.
- 1.26 In Puerto Ayora (7,700 people or 48% of the total population), water is provided from an underground source in poor condition. Most of the pipes are laid along paths exposed to vehicular traffic and sunlight. Breaks in the pipes are frequent and water losses are as high as 75%. Since there is no sewer system, the groundwater sources are contaminated by wastewater and seepage from trash. In Puerto Baquerizo (4,000 people or 25% of the total population), water is obtained from a

small reservoir through a system that suffers from high losses and only permits 70% of the water produced to be treated. Although it has a sewage system, the pipes are in poor condition and are exposed to sunlight, while the untreated effluents are discharged directly into the sea. In Puerto Villamil (1,400 people or 9% of the total population), groundwater is extracted through cracks in the rocks, with estimated losses of over 50% and not all the population is covered. The water is not treated and is believed to be contaminated. Some of the infrastructure – pumps and storage tanks – requires repair. Just 30% of the public has sewage services and the untreated effluents are discharged directly into the sea.

- 1.27 Solid waste which is an estimated 2,700 to 3,700 tons a year – the highest in the country in relative terms – is largely produced by tourism. The municipalities collect 90% of that waste and haul it to dumps that do not meet minimum technical or environmental standards. They constantly generate gases and odors that bother neighbors, which worsen in the dry season when the trash is incinerated and toxic gasses are generated. In short, the solid waste management system in the three towns suffers from the following shortcomings: (i) residential, hospital and hazardous waste is deposited in a common dump and handled indiscriminately; (ii) supervision of handling and disposal is deficient; (iii) waste is not compacted; and (iv) the incineration process is inadequate.
- 1.28 These services are provided by the three city governments under a system of undifferentiated rates, with serious shortcomings in the use of technical and administrative tools. In some cases, such as trash collection, rates do not cover costs. In Santa Cruz, for example, they barely cover 50%.

F. Ecuador's sustainable development policy

- 1.29 Recognizing that the difficulties described above are serious obstacles to the economic and social development and environmental protection of the country and the archipelago, the government has designed a series of policies whose main objectives are to alleviate poverty, stabilize and reactivate the economy, consolidate the groundwork for addressing political and institutional problems, and develop environmental strategies for national sustainable development.

G. Environmental strategy for sustainable development

- 1.30 The magnitude, multiplicity and complexity of environmental problems has led the Ministry of the Environment to design an environmental strategy for national sustainable development that includes extensive civic participation in preparation and execution and is aimed at environmental protection, the management and preservation of ecosystems and the conservation of biodiversity.
- 1.31 The strategy has identified the following goals: (i) conserving and making sustainable use of natural capital; (ii) addressing the problem of degradation of

fragile and threatened ecosystems and halting the process; and (iii) promoting environmental quality. The strategy seeks to create alternative sources of income based on the following criteria: (i) placing a fair value on renewable and nonrenewable natural resources; (ii) pricing and selling environmental services; (iii) making full use of the carbon emissions market (clean development mechanism); (iv) making management of conservation zones self-financing through revenues from tourism, the sale of environmental services and placing a fair value on natural resources; and (v) designing and developing a financial system involving incentives and penalties to promote and help finance the sustainable use of natural resources.

H. Environmental strategy for the Galapagos

- 1.32 The environmental strategy for the conservation and sustainability of the Galapagos has been designed as an integral part of the program to halt the degradation of fragile and threatened ecosystems. This strategy is the most recent link in the chain of actions taken by the country to protect the archipelago's ecosystems, reflected in the Law establishing the Special Regime for the Galapagos.
- 1.33 Passage of this law is one of the most important milestones in the country's initiatives on behalf of the archipelago. After considerable efforts by the local population and environmental organizations, Ecuador's constitution was amended to enable a special regime to be established for the islands which placed certain restrictions on use, with a view to preserving the unique condition of its ecosystems. Specifically, the law states that development in the archipelago should be guided by the load capacity of the ecosystems and be based on conservation of their integrity, particularly protection of native, endemic biodiversity.
- 1.34 The regime created special restrictions in the archipelago, particularly on the freedom of residence, property ownership and commerce that applies in the rest of Ecuador. The principles are intended to limit migration to the province and foster the operation of local entities in a framework that avoids duplication of functions and promotes comprehensive development planning with a view to conserving ecosystems. The law also establishes a policy framework that promotes a larger share in the earnings from the tourism industry for local industry and residents.
- 1.35 The new Special Regime Law and its regulations have created some of the conditions needed to enable regional planning and coordination to be carried out adequately in the inhabited part of the islands, which covers 3% of their territory. Under the law, the agency responsible for these tasks in the populated zones is the Galapagos National Authority (INGALA). The new legislation has also paved the way for bridging the gap that existed between planning and management of land and marine areas through an institutional arrangement that gives one authority (the DPNG) responsibility for implementing policies in both the marine and land areas.

- 1.36 Considerable progress has been made in developing legislation that complements the law, particularly its enabling regulations, which were issued in early 2000, and the management plan for the reserve with the respective zoning, which has been approved. In addition, the government continues to make progress in developing regulations to govern several of the activities carried out in the RMG.
- 1.37 The environmental strategy for the Galapagos is based on the law and its main objective is to contribute from the environmental management side to sustainable development and conservation in the archipelago. Its specific objectives are related to: (i) promoting conservation by building up the quality of the islands' human capital; (ii) promoting sustainable use of the archipelago's natural resources; and (iii) contributing to the conservation and recovery of threatened fragile ecosystems.
- 1.38 The strategy is based on promoting integrated management of conservation and sustainable use of the archipelago's resources, paying special attention to interactions between sea and land, the exceptional biodiversity, the special features of the Galapagos communities and their dependence on the islands' natural capital. The strategy also seeks to introduce new concepts for managing live marine resources, through a transition from a system of open access to a quota system in which responsibility for complying with obligations lies with the users of marine resources. The approach places special stress on sharing environmental management responsibilities and therefore promotes coordination of activities by different players and institutions in the archipelago (for example, INGALA, the municipalities, the DPNG, users of the RMG and civil society). The strategy is also based on the government's policy to promote strong financial sustainability in local governments and deconcentrated central government agencies.

I. Experience of the Bank and other multilateral institutions

- 1.39 The Bank has experience in supporting management of natural resources and the environment, including assistance for initiatives in coastal management through loans and nonreimbursable technical-cooperation projects. The Bank's first operation in coastal resource management was to support an initiative in Ecuador itself (LO-913/SF-EC). This experience, and experience elsewhere in the region, has taught lessons that the Bank has used to fine-tune its intervention strategy for the management of coastal and marine resources in Latin America.
- 1.40 The main lessons learned are: (i) the importance of genuine participation by society in setting priorities and decision making; (ii) the value of coordination among donors; (iii) the linkage between investments in land and river ecosystems and marine and coastal ones; (iv) the opportunity created for decentralization of natural resource management; (v) the need to ensure the financial sustainability of coastal management programs right from the preparation stage of loan and technical-cooperation proposals; and (vi) the need to demonstrate that suitable management of marine and coastal resources brings quantifiable benefits for national economies.

- 1.41 The Bank has already carried out one activity to support preparation of the present loan and has a second under way. The first was feasibility studies for the Galapagos environmental management program (ATN/JF-4713-EC) and the second is PPF funding for the Galapagos environmental management program (PPF-0189/OC-EC). Also, with a view to building capacity for the planning and management of conservation and sustainable development of the Galapagos, the Bank is carrying out three technical-cooperation projects to support: (i) the Ministry of the Environment, (ii) INGALA, and (iii) the DPNG, the Participative Reserve Management Board (JMP) and the Galapagos municipalities. These projects are getting under way and the eligibility conditions for the first disbursement have been complied with. The Bank is also supporting inspection and quarantine activities under the PROMSA project (LO-892/OC-EC) involving control at mainland ports and airports.
- 1.42 Ecuador has considerable experience in managing technical-cooperation and financial support for the Galapagos. Various government institutions (sector and local), foundations and NGOs that are active in the archipelago have carried out conservation and environmental protection projects and initiatives linked to sustainable local development. With support from the Global Environment Fund (GEF) and the United Nations Development Programme (UNDP), US\$18.3 million has been obtained to carry out a program for comprehensive control of exotic species.⁶ Support of US\$3 million from the United Nations Foundation (UNF) and US\$3.7 million from the Charles Darwin Foundation will complement the actions to eradicate exotic species. The World Bank is also channeling US\$940,000 of GEF funds into the biological monitoring of species. The Spanish Agency for Cooperation with Ibero-America (AECI) has committed up to US\$3.2 million to finance agricultural, tourism and cooperative strengthening activities and the World Wildlife Fund is channeling US\$1.2 million into basic research to restore habitats and control exotic species. The Bank's support is designed as an operation to attend to an area (the RMG) that does not have financing to carry out priority actions for ecosystem conservation and natural resource management. The operation will also be complementary in that it will help to strengthen the inspection and quarantine activities supported by other cooperants, with a view to protecting land, marine and coastal biodiversity. This Bank component will be strategic in that it will help to attract nonreimbursable funds from other donors.

⁶ This program contains components to: (i) prevent colonization by new species; (ii) demonstrate the cost effectiveness of eradicating, controlling and mitigating the impact of invasive species; (iii) develop capacity to focus research on addressing the threats posed by exotic species; (iv) include the management of exotic species in sector development; (v) establish financial mechanisms to cover the recurring costs of measures to control those species; and (vi) develop warning systems in the archipelago and on the mainland regarding those species. The program is closely related to the inspection and quarantine component in the Bank's program. The investments that the IDB will make in these areas are viewed as cofinancing by the GEF and are highly important for the success of the GEF-UNDP program.

- 1.43 The Bank's current strategy in Ecuador has the following objectives: (i) to halt and reverse economic deterioration; (ii) to lay the groundwork for sustained growth; (iii) to permanently alleviate poverty and improve income distribution; and (iv) to promote the efficient use of natural resources and environmental protection. The present project corresponds to objective (iv) and is closely related to objectives (ii) and (iii) which, in turn, are consistent with the priorities established by Ecuador for its different strategies, plans and programs for socioeconomic development, natural resource management and environmental protection.

J. Design of the program

- 1.44 The prospects for undertaking a successful program for management of the RMG are particularly bright at present. Passage of the Law establishing the Special Regime for the Galapagos, significant progress in participative management of the reserve, and a strengthened regional structure for conservation and sustainable development of the archipelago and the presence of recently elected municipal authorities whose agendas accord top priority to managing basic services more effectively are some of the features of the new scenario. This progress is an essential part of building a new environmental management model that will promote shared responsibility for making and implementing decisions on the use of natural resources, providing environmental services that will be financially sustainable, and contributing to the decentralization process under way in the country.
- 1.45 On that basis, the operation has been designed as a series of environmental management activities on the local, regional and national scales, linked to activities to create capacity and coordination mechanisms. The investments are consistent and supplement the national government's efforts in the archipelago with the help of other donors and will contribute to the integration of the functions and activities carried out by the DPNG, SESA, the municipalities and civil society, including local residents. To reduce environmental degradation and protect biodiversity, thereby preserving the contribution made by these resources to the national and local economies, actions will be carried out to manage fisheries, tourism and other uses of the marine reserve, control the introduction of exotic species and strengthen municipal capacity to manage basic services, an action that includes raising borrowing capacity so that municipalities can raise financing for infrastructure works such as water supply and sewer systems, pre-treatment of wastewater and solid waste disposal. In this way, the conditions would be created for giving Galapagos municipalities access to other potential sources of financing such as the IDB and other donors (Spanish and Danish Protocols) that are available to the country.

II. THE PROGRAM

A. Objective

- 2.1 The general objective of the program is to reverse the process of environmental degradation in the Galapagos Islands. The specific objectives are to: (i) support effective implementation of the management plan for the Galapagos Marine Reserve in order to help conserve the marine and coastal ecosystems and allow for the sustainable use of resources; (ii) complement efforts to reduce the introduction and spread of exotic species, pests and diseases that threaten the archipelago's native biodiversity; (iii) strengthen the coordination capacity and develop the environmental management mechanisms of the Galapagos National Park Directorate (DPNG), the Participative Reserve Management Board (JMP), the Inter-Agency Reserve Management Authority (AIM) and the Galapagos municipalities; and (iv) lay the groundwork that will enable the Galapagos municipalities to gain access to financing for environmentally-friendly potable water, sewerage and solid waste management services (see Annex II-1: Logical framework).

B. Program components

- 2.2 The program has four main components: (1) management of the marine reserve; (2) inspection and quarantine; (3) institutional coordination and management; and (4) basic sanitation studies and emergency works.

1. Management of the Marine Reserve (US\$6 million)

- 2.3 This subprogram is intended to start up the management plan for the Galapagos Marine Reserve so that a series of integrated actions for the sustainable use of natural resources and conservation of the marine and coastal environments in the reserve can be carried out and sustained over time. It includes the following components.

a. Natural resource management (US\$1.4 million)

- 2.4 The program will support the direct application of a set of tools for managing the use of national resources in the RMG from a long-term perspective that will limit potential impact on the marine and coastal ecosystems, while preventing conflict among the economic activities that take place in the RMG. The main tools include permanent zoning, an improved system for participative management and specific measures to ensure that the in-shore fishery and tourism are sustainable in the RMG. The overall approach is to support the development of a shared management system for the reserve that will be sustainable over the long term.

- 2.5 The program will support the DPNG in establishing a small unit for marine zoning, which will have two specialists in charge of verifying the impact of the provisional zoning plan, proposing adjustments based on the lessons learned, promoting a gradual consensus on a final plan and maintaining an up-to-date geographic database for periodic evaluations and updating of the zoning plan. The program will also finance short-term consulting services to advise on zoning methods used in other protected marine areas and perform the corresponding evaluations, equipment and training. Workshops will also be held and information materials will be produced, including maps, to inform the public about the final plan and promote compliance.
- 2.6 For better representation of the different users of the RMG and to boost their capacity to reach and comply with decisions on resource management, activities will be financed in the JMP to raise awareness and manage conflicts. The program will finance a full-time coordination in the DPNG, who will be responsible for programming and following up on the activities of the JMP, facilitating coordination between the JMP and the Inter-Agency Management Authority and, in general, verifying that agreements and resolutions are understood and complied with. The coordinator will be supported by a team of six previously-trained facilitators who will be based on Isabela, San Cristóbal and Floreana and will work directly with users of the RMG in order to extend the geographic coverage of the participative process to all populated areas in the archipelago. The program will also finance short-term consulting services for conflict management, including mediation when warranted, and workshops to provide training for the members of the JMP and the DPNG
- 2.7 To manage the in-shore fishery, an automated information system will be established to register vessels, fishermen, fishing associations and buyers that make up the sector in the Galapagos islands. The necessary equipment and materials will be provided and training will be offered in managing the fisheries register. Support will be provided for workshops and the publication and dissemination of statistical reports. A short- and medium-term fisheries extension program will be supported and a feasibility study will be conducted on economic alternatives to the fishery. As a complement to the extension program, a pilot project will be undertaken for the recovery of traditional fisheries, such as lobster, cod and other species. The purpose is to permit fishermen to adopt economically viable alternatives that will create less environmental impact or to steer them into other nonextractive activities. Short-term technical advisory services will be contracted and a fund will be established to sustain the extension activities.
- 2.8 Designs, basic studies, construction and equipment will be provided for a facility for the storage and marketing of fish products on Isabela island. A mechanism will be designed for the management and medium- and long-term sustainability of the facility and training will be provided to operate it.

- 2.9 To manage tourism in the RMG, short-term consulting services will be contracted to: (i) determine acceptable limits of change for environmental conditions at diving sites; (ii) design an incentive program to encourage the industry to comply with good practices, based on relevant experiences in other parts of the world; and (iii) design and support a training program for diver guides, with stress on safety at sea and low-impact uses. The program will finance the production of materials and training workshops.

b. Maritime security and control (US\$3.2 million)

- 2.10 A complete maritime security and control system will be established for early detection and rapid response to emergencies at sea and to infractions of the rules governing the use of resources and other regulations. The system will consist of the following interconnected elements: (i) an administrative structure, procedures and tools for search and rescue at sea, surveillance and law enforcement; (ii) a system for remote detection, surveillance and reporting of vessels sailing in the reserve; (iii) a network of land-based command and control stations to process early warnings, coordinate emergence responses and make interceptions; and (iv) expanded capacity in the DPNG for search and rescue at sea, surveillance and law enforcement, and for the promotion of safety in navigation and diving. The comprehensive system has been designed to ensure effective coverage of areas that are priorities on account of the intensity and seasonality of use, environmental vulnerability and physical presence in remote areas where infractions occur.
- 2.11 To establish the system, the program will finance the procurement and installation of a portable radar station and three fixed stations, satellite positioning equipment to detect ships operating in the reserve and four command and control posts equipped with the minimum facilities needed for shelter and operations (see Annex II-2: Map of the comprehensive system).
- 2.12 The marine surveillance capacity of the DPNG will be built up by purchasing four speedboats (for coastal patrols) and one ocean-going boat, complementary field equipment and storage facilities. A decompression chamber will be built and staffed with medical personnel trained to deal with emergencies involving tourist divers and fishermen. The program will also finance communications and information processing equipment to maintain a register of fishermen and vessels. Information networks, designed to provide a timely flow of information on traffic inside the reserve, will also be installed.
- 2.13 The program will finance the development of administrative procedures, supervision of the installation of the equipment and stations, and the training needed to coordinate operation of the system by the DPNG in cooperation with the Directorate General of the Merchant Marine and coastal areas.

**c. Environmental education, communications and training
(US\$500,000)**

- 2.14 Long-term program sustainability depends on a gradual process during which users of the resources acquire the values, knowledge and skills necessary to participate effectively in managing the RMG. To accomplish its objectives, participation must extend beyond the formal structures of the JMP, to involve the majority of the archipelago's residents. To that end, the program will support activities involving public awareness raising, formal and informal education, inter- and intra-sector communications, organizational development of user groups and the creation of capacity in the DPNG.
- 2.15 The program will finance a full-time specialist based on Isabela, four experts in communications and assistants who will be assigned to the DPNG to support the development of local leadership that will promote environmentally-responsible fisheries and tourism and favor effective communications among the networks of RMG users. The team of specialists in education and communications will establish a reliable baseline on the needs of user groups and carry out activities to promote an understanding of the importance of participating in marine resource management. Fishing cooperatives, shipbuilders' associations and tourism operators, women's and youth groups and other grass-roots organizations will receive technical assistance in building a shared vision of a community that is responsible for managing its fisheries resources. Educational materials will be designed for that purpose and to increase local appreciation of the marine reserve. The Charles Darwin Foundation will provide technical assistance for planning and performing periodic evaluations of the general environmental education component and the communications strategy. Other specialized national organizations will be contracted to design and conduct national and international promotion campaigns, develop a proposal to organize and establish a post-graduate program in the management of protected marine areas and assist user groups in developing their organizations. Support will also be provided for the operation of environmental education centers on the three islands.

d. Research and monitoring (US\$900,000)

- 2.16 The program will require timely information for setting priorities, reaching agreements and making decisions on the use and conservation of the RMG. The entities that participate in resource management – including the DPNG, JMP and AIM – require reliable information on conditions in the RMG, its functioning as an ecosystem that serves as the foundation for a series of economic activities, and trends that are indicative of the impact of the different resource management activities (e.g. the zoning plan).
- 2.17 The program will support three types of research and monitoring activities:
(i) support for the DPNG in carrying out its responsibilities for planning,

coordinating and supervising research activities, including effective application of the results; to that end a full-time coordinator will be contracted for the pertinent DPNG unit; (ii) priority research that is consistent with the management plan for the Galapagos Marine Reserve, including establishment of a baseline for marine biodiversity, evaluation of commercial fish stocks, analysis of the impact of the by-catch and an evaluation of the condition of visitor sites in the marine reserve; and (iii) design and introduction of a cost-efficient program for monitoring biological, social and economic indicators, with particular stress on the level of compliance with the Special Regime Law as regards control over migration and proposals regarding enforcement tools. Monitoring activities will be designed to promote participation by user groups in collecting information and analyzing changes in trends.

2. Inspection and quarantine (US\$1.8 million)

- 2.18 Inspection and quarantine control will be supported to prevent the entry and spread of exotic species, pests and diseases. Infrastructure will be built at airports and ports on the islands of Baltra, Santa Cruz, Isabela, San Cristóbal and Floreana, and the central offices for the Galapagos inspection and quarantine system (SICGAL) will be constructed at Puerto Ayora. They are uncomplicated works scattered among the islands in question. Equipment for inspection and treatment, incinerators, and communications and office equipment will be provided, as will basic furniture for the installations. Four light trucks, four motor boats and minor transportation equipment will be procured. A consultant will be contracted to establish a system of fees to be charged by SICGAL for its inspection and quarantine services. Training workshops and seminars will also be held.
- 2.19 The main building at the Baltra airport will be upgraded, including: an inspection room, an inspectors' office, a pre-diagnostic laboratory and sanitary services. At Puerto Ayora a building will be constructed to serve as the operations base for SICGAL, including offices, a meeting room, a laboratory and a workshop. The building will be approximately 365m². An inspection room and inspectors' office will also be built at the municipal wharf.
- 2.20 A baggage and freight inspection room will be built at the airport on Isabela and an office and inspection room will be built at the port. A baggage and freight inspection room, an office and sanitary facilities will be built at San Cristóbal airport and an inspection room will be built on the wharf.
- 2.21 The system will require technical and administrative staff and inspectors. Counterpart funds taken from the 5% of the entry fee to the park that will go to SICGAL will be used to pay for its staff of 36.

3. Institutional coordination and management (US\$700,000)

- 2.22 The coordination capacity of the institutions involved in the management and protection of the Galapagos islands will be strengthened, and management mechanisms will be developed in them. The Ministry of Environment's Galapagos Islands Coordination Unit (UCIGAL) will be strengthened as will INGALA in the archipelago. Capacity will be built up in the DPNG to manage the protected marine area and in the JMP to optimize its process of concertation and joint decision making. The municipalities' capacity to deliver basic services will be developed. The following activities will be carried out.

a. Strengthening for UCIGAL and INGALA (US\$320,000)

- 2.23 In order to provide UCIGAL with sufficient capacity to provide the minister's office with adequate technical support on the Galapagos, two professionals with extensive experience in environmental management will be financed, in addition to basic equipment to systemize information on programs, projects and actions for conservation and development in the archipelago. INGALA's ability to administer and control migration and its regional planning capacity will also be improved.

b. Development of the DPNG and JMP (US\$350,000)

- 2.24 The DPNG's planning capacity will be strengthened, organizational processes and operating manuals will be developed and administrative and financial monitoring and control systems will be introduced. Roles, spheres of competence and systemic interrelations among the JMP, AIM and the DPNG will be developed. National and international technical assistance will be contracted and workshops and basic equipment will be financed. The studies include a management information system, manuals of functions and procedures, general regulations and monitoring and evaluation procedures.

c. Municipal development (US\$150,000)

- 2.25 Technical assistance will be provided to develop municipal capacity to access financing, including the development of rate systems, property registers and improvements in rate collection. Support will also be provided in building up project formulation, financial reporting, evaluation and follow-up capacity. Such support is expected to enable the municipalities: (i) to improve their administrative and financial capacity to deliver efficient services, (ii) to prepare strategic administrative and financial plans showing that revenue from the sale of services at least covers the cost of operating, maintaining, and administering these services, and (iii) to attain the institutional capacity for executing, operating, and maintaining the works.

4. Basic sanitation studies and emergency works (US\$1 million)

- 2.26 Feasibility studies and engineering designs will be prepared for the rehabilitation and upgrading of potable water, sewerage and wastewater disposal systems in the towns of Puerto Baquerizo and Puerto Villamil. The emergency works cover the three Galapagos municipalities and include repair of distribution tanks and chlorination systems, the main intake pipes and pumping stations. Operation of garbage dumps will be improved and programs for the reduction, reuse and recycling of solid waste from ships and tourism operations will be financed. A program will be established to reship recyclable waste such as cardboard, glass, metal, oil and plastics to the mainland.

C. Cost and financing

- 2.27 The program will cost an estimated US\$13 million equivalent, with the Bank financing US\$10.4 million from the Ordinary Capital, subject to financing from the Intermediate Financing Facility applicable to the entire loan. The financial terms of the loan are: amortization period 25 years, four years grace, disbursement over four years, a credit fee of 0.75% and an inspection and supervision fee of 1%. The local contribution of US\$2.6 million equivalent will come from the income generated from the entrance fees paid by visitors to the Galapagos National Park. The DPNG will budget each year for the funds needed to cover its contributions to the program. The cost table (Table 2.1) presents the budget by categories.

Table 2.1
COST AND FINANCING

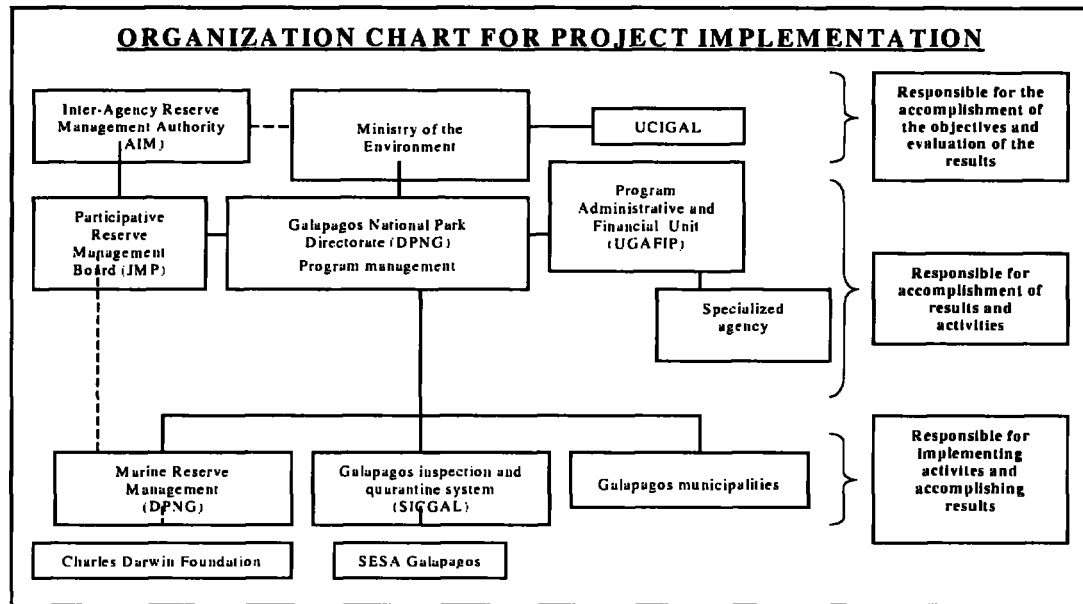
CATEGORY	FINANCING			%
	IDB (OC/IFF)	LOCAL*	TOTAL	
I. ENGINEERING AND ADMINISTRATION	1,490	260	1,750	13.5
1. Engineering	100		100	0.7
2. Administration	440	260	700	5.4
3. PPF	800		800	6.2
4. Specialized agency	150		150	1.2
II. DIRECT COSTS	7,600	2,020	9,620	74.0
1. Support for the RMG management plan	4,950	1,050	6,000	46.2
a) Natural resource management	1,100	300	1,400	10.8
b) Maritime security and control	2,700	500	3,200	24.6
c) Environmental education and communications	400	100	500	3.8
d) Research and monitoring	750	150	900	6.9
2. Inspection and quarantine	1,200	600	1,800	13.8
3. Institutional coordination and management	650	170	820	6.3
a) Strengthening for UCIGAL	200	0	200	1.5
b) Strengthening for INGALA	100	20	120	1.0
c) Development of DPNG and JMP	200	150	350	2.7
d) Municipal development	150		150	1.2
4. Studies and emergency sanitation works	800	200	1,000	7.7
SUBTOTAL	9,090	2,280	11,370	87.5
III. UNALLOCATED				
Contingencies	506	242	748	5.7
IV. FINANCIAL COSTS				
Interest	700		700	5.4
Credit fee		78	78	0.6
Inspection and supervision	104		104	0.8
TOTAL	10,400	2,600	13,000	100.0
* Revenue generated from admission fees to Galapagos National Park.				

III. PROGRAM EXECUTION

A. Execution plan

- 3.1 General administration of the Galapagos environmental management program will be the responsibility of the Ministry of the Environment, through the DPNG. The director of the DPNG will act as program manager. A program administrative and financial management unit (UGAFIP) will be established to support the DPNG's financial and administrative structure. The unit will operate physically in DPNG installations and will respond to program guidelines determined by the manager and to the planned resource requirements. The unit will be created under a ministerial order. The ministry will receive support from the UCIGAL in coordinating project activities with other initiatives to benefit the Galapagos.
- 3.2 A specialized agency to assist with contracts and procurement will be hired to support UGAFIP in activities that cannot be carried out from the Galapagos, particularly international procurement of goods and certain specialized services. The agency will be selected through a competitive process to ensure the quality and timeliness of the services provided.⁷ **Creation of UGAPIF and contracting of the specialized agency are conditions precedent to the first disbursement.** The execution plan will be:

⁷ The suggested selection criteria are: (i) experience in executing projects in Ecuador, 20%; (ii) experience in working with the IDB, 15%; (iii) qualifications of the personnel to be assigned, 35%; and (iv) cost of the services, 30%.



- 3.3 Based on their spheres of competence, the agencies responsible for executing the project will be: (i) the DPNG for activities in the RMG, including institutional strengthening; (ii) the SESA supported by the SICGAL for developing the inspection and quarantine system; (iii) the Charles Darwin Federation for research and education, in cooperation with the INGALA for monitoring and recommendations for effective migration control; and (iv) the municipalities of Puerto Ayora, Puerto Baquerizo Moreno and Puerto Villamil for studies on basic services and emergency works.

B. Execution of the components

1. Marine reserve management

- 3.4 The DPNG will be responsible for executing this component and ensuring that it is consistent with the general execution plan described above, including mechanisms for coordination among the program administrative and financial unit, AIM and the JMP. The director of the DPNG, thorough its Marine Resources Unit, will ensure technical coordination of all activities and will supervise execution. The DPNG will contract and assign field staff, prepare terms of reference, supervise contracts with consulting firms and individual consultants and monitor compliance with the interagency agreements on activities in the RMG.
- 3.5 Activities to manage the reserve will be carried out by DPNG staff with support from the Charles Darwin Foundation, the Ecuadorian Navy, the Directorate General of the Merchant Marine and Coastal Areas (DIGMER), in-shore fishermen's organizations and research institutions. The DPNG will update existing agreements

with each of these entities. The activities to manage the RMG are based on application of the general regulations of the Law establishing the Special Regime for the Galapagos and the specific regulations (fishery, tourism and environmental control) that are currently being drafted.

- 3.6 The DPNG will contract additional staff to carry out the activities for resource management, education, communications and monitoring, to work as field technicians, facilitators and assistants (a total of 40 people). This contingent will work with groups of users of the reserve in Isabela, San Cristóbal and Floreana, carrying out fisheries extension activities, supporting supervision of field operations and collecting information for monitoring purposes. Two specialists in marine resources, a coordinator for the JMP and a specialist in education will also be hired for the first three years of the project. This personnel will gradually be absorbed into the DPNG's permanent structure, which will boost its capacity to lead the participative management process and arrange for research activities.
- 3.7 To make the comprehensive system for security and control fully operational, it will be necessary to hire an international firm with solid experience in maritime operations. The firm will be responsible for preparing the bid documents for construction and the procurement of specialized equipment, supervising the installation of working networks, developing operations manuals and providing on-site training in system operations. Specialized detection and communications equipment, data processing equipment and patrol boats will also be procured.
- 3.8 The DPNG will be responsible for operation and maintenance of the marine security and control system, with support from DIGMER and the Ecuadorian Navy, under existing agreements. The new powers and responsibilities will be established by amending the respective interagency agreements. The DPNG's Logistics Unit will be strengthened to enable it to adequately maintain the stations, vessels and specialized equipment. In close consultation with users of the marine reserve and with a view to assuring long-term sustainability, a cost-recovery system will be designed, including adjustments to rates to reflect improvements in services, such as search and rescue services. **Signature of amended agreements between the DPNG and DIGMER and the Ecuadorian Navy will be a condition precedent to authorization to purchase the hyperbaric chamber, the right of use to which will be granted to the Ecuadorian Navy.**
- 3.9 Environmental education and communications activities and some of the research will require signature of a coexecution agreement between the DPNG and the Charles Darwin Foundation. The operation also plans to contract several individual consultants. The activities to be entrusted to the foundation will cost an estimated US\$700,000. The foundation has been operating for over 40 years with the sole purpose of promoting conservation of the island ecosystems and species. The qualifications of its staff and the experience it has built up in the islands, its national and international publications and its position as a sister organization of the DPNG

are indications of its status as a lead institution in research and environmental education in the Galapagos. Research and environmental education are a complement to the actions already underway, which are backed by agreements between the government, the DPNG and the foundation. **Signature of a coexecution agreement by the DPNG and the foundation will be a condition precedent to the first disbursement.**

2. Inspection and quarantine

- 3.10 The SESA, Galapagos office, will execute this component. An advisory committee will be established in the Technical Secretariat of the SICGAL to coordinate interagency activities for conservation of biodiversity, examine the annual operating plans, and evaluate SICGAL's progress. **Establishment of a SESA office in the Galapagos and signature of a framework agreement by the DPNG and SESA will be conditions prior to the first disbursement.**
- 3.11 The infrastructure works will be contracted through local competitive bidding. The program administrative and financial management unit will be responsible for preparing the bid documents, qualifying firms and inspecting the works. Inspection, treatment, laboratory, communications and office equipment, vehicles and boats will all be procured in accordance with Bank procedures.

3. Institutional coordination and management

- 3.12 The DPNG will be responsible for activities under this component involving strengthening for itself, INGALA, JMP, and UCIGAL. A firm with extensive experience in institutional management will be hired through competitive bidding to implement the organizational development activities, including the management information system. The other activities will be carried out by contracted professionals specializing in environmental management and other consultants and the necessary equipment will be procured. Depending on the amounts involved, the contracts and procurements will be carried out through the program administrative and financial management unit or the specialized agency through local or international competitive bidding.
- 3.13 Final responsibility for the municipal strengthening component will rest with the Galapagos municipalities. A consulting firm will be contracted through competitive bidding to design municipal rate and collection systems, improve services and introduce cost-recovery mechanisms.

4. Studies and emergency works for basic sanitation

- 3.14 The three Galapagos municipalities will bear final responsibility for executing this component. Funds will be transferred to the municipalities through the DPNG, the

Ecuadorian Development Bank (BEDE), or directly by the Ministry of Finance.⁸ Depending on the amounts involved and the nature of the studies and works, the municipalities will either use competitive bidding or contract minor works directly with local firms. **Signature of execution agreements with the respective municipalities will be a condition precedent to the disbursement of funds to finance emergency sanitation works.**

- 3.15 The feasibility studies will include recommendations on how these public services should be managed (including outsourcing options), technical specifications and performance requirements of the equipment to be procured and options for the transfer of installations and equipment.

C. Financing for permanent basic sanitation works

- 3.16 The government has expressed interest in Bank financing for permanent basic sanitation works after the institutional strengthening of the municipalities has concluded. Bank Management will evaluate the request, based on compliance with the following requisites⁹: (i) institutional strengthening in the Galapagos municipalities to ensure they have the administrative and financial capacity to deliver efficient services; (ii) the municipalities must present strategic administrative and financial plans that include financial projections demonstrating that income from the sale of services will cover the costs of operating, maintaining and administering them, as a minimum; (iii) the municipalities must demonstrate that they have the institutional capacity to execute, operate and maintain the works; and (iv) presentation of feasibility studies and project designs for the permanent works, including studies evaluating the environmental impact of the works for each municipality.

D. Project readiness

1. Management of the marine reserve

- 3.17 The zoning plan for the RMG has already been approved for the first two years and the management plan is in effect. The design of the program to support its implementation, prepared by the International Union for Conservation of Nature is ready. Specifications are available for the equipment for natural resource management, marine security and control, environmental education, communications and training and investigation and monitoring. The terms of reference for contracting the consulting firms, individual consultants and for

⁸ The government will determine the best mechanism for transferring funds during the respective negotiations.

⁹ The Galapagos municipalities have the option of accessing other sources of financing available to Ecuador such as the IDB (municipal development program II – EC-0139) and other donors (Spanish and Danish Protocols)

recruiting specialists for the different components in this subprogram have been agreed upon.

2. Inspection and quarantine

- 3.18 The design of the components, terms of reference for consulting contracts and technical specifications for the equipment to be procured are available. The final designs of the infrastructure works are being prepared.

3. Institutional coordination and management

- 3.19 The institutional arrangements for executing the program have been agreed upon, including the scope of the memoranda of understanding and the interagency agreements. Agreement has also been reached on the terms of reference for contracting consultants and recruiting specialists and specifications are ready for the equipment required as part of the institutional strengthening of the DPNG, the JMP, UCIGAL and the three Galapagos municipalities.

4. Basic sanitation studies and emergency works

- 3.20 The studies, including the designs for execution of the potable water and sewerage emergency works, are ready and so are the studies on the initial actions for solid waste management. Feasibility studies are being prepared for the permanent water and sewerage and wastewater treatment works in Puerto Ayora. Terms of reference are available for the studies on the works in Puerto Baquerizo Moreno and Puerto Villamil. Feasibility studies for the final disposal of solid waste will be available six months after the program begins.

E. Execution period and investment timetable

- 3.21 The program will be executed over four years. This period was determined after a detailed analysis of the times required for each project component, including bid periods and the time they require in Ecuador.
- 3.22 A summary of the investment timetable for the program is presented below (Table 3.1).

Table 3.1
INVESTMENT TIMETABLE
DIRECT COSTS (IN US\$ THOUSANDS)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	TOTAL
IDB/OC/IFF	2,300	4,750	1,300	640	8,990
LOCAL	300	1,000	600	360	2,260
TOTAL	2,600	5,750	1,900	1,000	11,250
	23	51	17	9	100

F. Procurement and bid timetable

- 3.23 Procurements of goods and services and contracts for works will be carried out in accordance with the procedures established in Annex B of the Loan Contract. Bids for works and/or supplies have been grouped into packages. International competitive bidding will be compulsory for goods and services over US\$250,000 and for construction projects over US\$2 million. Bids for lesser amounts will be carried out accordance with the ad hoc precontractual procedures agreed to by the government and the Bank. Consulting services will be contracted in accordance with Bank procedures.
- 3.24 To facilitate the procurement and contracting process and in consideration of the logistical difficulties in the Galapagos, a specialized agency will be contracted for procurements, as explained in paragraph 3.2.
- 3.25 The tentative bid schedule presented in Annex III-1 shows the calls for bids and their estimated amounts.

G. Advance funds and cost recognition

- 3.26 During project preparation, US\$800,000 was provided through loan PPF-1172/OC-EC to finance the final designs of the program. The first disbursement should include provision for the PPF loan, up to a total of US\$800,000. The Ministry of the Environment and the DPNG have asked to have additional costs incurred in project preparation and the start up of certain preparatory activities recognized from the local contribution. It is recommended that the prospective loan contract include a clause recognizing prior expenses charged to the local counterpart up to the equivalent of US\$250,000.

H. Operation and maintenance

- 3.27 Under the component to support management of the Galapagos Marine Reserve and the respective institutional strengthening, the DPNG will be responsible for managing, operating and maintaining the works and equipment to be installed, which will form part of its systems. The DPNG will entrust operation and

maintenance of the pressure chamber to the Directorate General of the Merchant Marine and will include this obligation in the clauses extending or amending its agreement with that institution.

- 3.28 The SESA office in the Galapagos will be responsible for administering, operating and maintaining works and equipment in the inspection and quarantine component, through the SICGAL.
- 3.29 The Galapagos municipalities will bear final responsibility for managing, operating and maintaining the emergency works for basic water and sewerage infrastructure and final solid waste disposal, although they may eventually outsource the delivery and maintenance of those services.
- 3.30 The DPNG and the participating municipalities will present a report on operation and maintenance of the works and the condition of the systems. The reports will be presented annually to the Bank for 10 years, within the first quarter of each year starting in the year after the works are completed and put into service. The reports will be based on the reports submitted by the entities that support each system (the Charles Darwin Foundation, the Ecuadorian Navy and SESA) and specific clauses on operation and maintenance will be included in each agreement.

I. Supervision

- 3.31 The Bank's Country Office in Ecuador will be responsible for supervising and monitoring the project, with support from the project team. Annual evaluations will be performed during the project jointly by the project team, the specialist at the Country Office, the DPNG and the municipalities. These evaluations will make it possible to identify difficulties in program execution and in actions to support inspection and quarantine, and the planning and execution of the environmental sanitation works.
- 3.32 The mid-term evaluations will monitor progress in implementing the management plan for the reserve and compliance with the physical goals for the different program activities. Compliance with program goals and objectives will be reviewed, with stress on: (i) improvement in the sustainable use of marine and coastal resources and conservation of the biodiversity and habitats in the RMG (recovery rates for ecosystems and key species); (ii) functioning of the inspection and quarantine system (reduction in the introduction and spread of exotic species, pests and diseases that threaten the native diversity of the archipelago); (iii) strengthening of the coordination and management capacity of the DPNG, JMP, AIM, the Galapagos municipalities and UCIGAL (by the end of the year the DPNG's marine resources management unit will be functioning and UCIGAL will be fully operational); (iv) functioning of potable water, sewerage and waste disposal systems in an environmentally-friendly manner (reduction in complaints by citizens); (v) eventual review of the structure of park admission rates and

granting of licenses and permits for use of the reserve; and (vi) compliance with migration controls and the extent to which the Special Regime Law is bringing about a reduction in population growth through migration (see Annex II-I, logical framework). Twelve months after the project begins, the government will present the Bank with the specific regulations governing fishing and tourism.

J. Accounting and audits

- 3.33 The Ministry of the Environment, through the DPNG and the Program Administration and Financial Management Unit, will have the following responsibilities: (i) to open separate, specific bank accounts to manage the loan proceeds and local counterpart funds; (ii) to maintain adequate accounting, financial and internal control systems for handling program funds; (iii) to organize the accounting system in a way that permits sources and uses of program funds (in the DPNG and the other coexecuting agencies) to be identified, backed by the documentation needed to verify transactions and facilitate the timely preparation of the program's financial statements; (iv) to prepare and present to the Bank's satisfaction disbursement requests, justifications of the use of funds and semiannual reports on the revolving fund, consolidating the information provided by the coexecuting agencies; (v) to ensure that the supporting documentation for disbursements is filed in a suitable fashion; and (vi) to prepare and present the program's financial statements to the Bank.
- 3.34 The DPNG will present semiannual reports to the Bank on the status of the revolving fund, within 60 days after the close of the fiscal year, during the program.
- 3.35 The DPNG will present its own and the program's annual financial statements, within 120 days after the close of each fiscal year during execution. The financial statements are to be certified by an independent firm of auditors acceptable to the Bank and presented in accordance with the Bank's auditing requirements. The external auditing costs have been included in the Bank loan.
- 3.36 During the first year of the program, an independent firm of public accountants will be hired to perform the audits. The contract will cover the entire execution period, with the Bank's nonobjection. The contract between the executing agency and the auditor will contain a safeguard clause stating that it can be rescinded at any time and without penalty if the Bank objects, under its eligibility requirements, to allowing the auditor to continue providing services for the remainder of the project.

IV. THE BORROWER AND THE EXECUTING AGENCY

A. Borrower, executing agency and guarantor

- 4.1 The borrower will be the Republic of Ecuador and the executing agency will be the Ministry of the Environment, through the DPNG, with participation by SESA, the Charles Darwin Foundation, and the municipalities of Puerto Ayora, Puerto Baquerizo Moreno and Puerto Villamil.

1. The Ministry of the Environment

- 4.2 Environmental management in Ecuador is the responsibility of the Ministry of the Environment, which was created in 1996 and whose current functions are established in the Environmental Management Act published in July 1999. Its responsibilities include: (i) land management planning; (ii) approval of national environmental management plans and projects; (iii) proposal of environmental management standards and environmental impact assessments; and (iv) promotion of community participation in formulating policies for environmental protection and suitable natural resource management.
- 4.3 The ministry has established the Galapagos Islands Coordination Unit (UCIGAL) to achieve closer coordination for environmental management in the archipelago. It reports to the minister and is headquartered in Quito. The unit's main purpose is to act as liaison between local organizations in the Galapagos, international, multilateral and bilateral institutions, and the Ministry.
- 4.4 UCIGAL plays a very important role in implementing environmental management laws and the Special Regime for the Galapagos, providing technical support for the office of the minister and supporting the DPNG, particularly with respect to: (i) developing proposals for policies and strategies for the protected area on the islands; (ii) advising all institutions and projects linked to the Galapagos; (iii) keeping cooperator agencies that require specific data on the islands permanently up to date; and (iv) determining the priority of the projects presented. Since the ministry chairs the AIM and the Technical Planning Council of the Galapagos National Authority, UCIGAL will be responsible for providing technical support for the minister's office on matters relating to the Galapagos, particularly preparation of its regional plan and strategy.
- 4.5 UCIGAL is currently being structured and its capacity has yet to be developed, particularly regarding the final structure of the work team and its equipment, which will be taken care of under the program.

2. The Galapagos National Park Directorate

- 4.6 The Ministry of the Environment administers the archipelago's land and marine areas through the DPNG. Until 1998, it focused on the protection and conservation of land ecosystems. After the Law establishing the Special Regime for the Conservation and Sustainable Development of Galapagos Province was passed in March 1998, the DPNG also took charge of managing the RMG. In particular, it is responsible for coordinating the preparation and supervision of plans for the management, conservation and sustainable use of the RMG and the other policy and planning instruments.
- 4.7 The DPNG is a medium-sized organization structured on four levels: management (nine staff), advisory (six staff), operational (31 employees) and support (92 employees). It operates in an open horizontal fashion, facilitated by good levels of identification with the institution. Sixty-eight of the DPNG's staff are full time and the other 70 are hired on temporary contracts.
- 4.8 Under its new responsibilities and the deconcentrated structure established in the Law establishing the Special Regime for the Galapagos, the DPNG is in the process of introducing a new organizational and operating structure. It will establish a flat organization, manage by processes rather than functions, reorganize its administrative and support procedures and strengthen each macroprocess. This will be done by developing its new organizational and operating structure, rationalizing spending, promoting participation by the private sector and the general public in managing the park and the marine reserve, improving administrative efficiency by reorganizing and rationalizing processes, and strengthening control systems for the park and the marine reserve.
- 4.9 The DPNG is also in the process of introducing the accounting and budgeting system established by the Office of the Controller General for public sector agencies. In 2000, it began preparing the data that will permit it to use the integrated financial management system, which is compulsory. Final guidelines from the Ministry of Finance are required before the system can be started up. Part of the present operation is intended, precisely, to strengthen the DPNG in administrative, financial and accounting management, including operation of the system. It will receive support from the Program Administrative and Financial Management Unit to successfully carry out these functions.
- 4.10 The resources managed by the DPNG come from public and private contributions, donations, resources generated by its administrative management and park entrance fees, loans and funds allocated under special laws. They do not enter into the national treasury account and are administered directly by the DPNG through its own bank accounts and budget. The DPNG also collects and distributes the income received from the fee to visit the park.

- 4.11 In 1999, the government granted the DPNG greater financial autonomy. Its budget is currently made up of 40% of the entry fees to the park, licenses, patents, permits and fines and funds from international cooperation agencies. Its total budget for 1999 was US\$1.3 million, but it was given an additional US\$1.7 million, chiefly for salaries, investments in infrastructure, management of the RMG and funds for SICGAL. Of these items, only the last was not spent, since SICGAL was not fully operational. Budget performance for the park in 1999 was 92%, not including that item.
- 4.12 Most of the activities related to projects and programs additional to the regular budget for the park were almost completely executed (95% on average). This is true of the support agreements with the Charles Darwin Foundation, the Isabela project, the biodiversity master plan and activities to manage the marine reserve.
- 4.13 The DPNG's budget for 2000 will be US\$2.5 million, reflecting an increase in salaries owing to the new classification of positions it performed, which was approved by the National Remuneration Council.
- 4.14 As for income, there will be an increase of US\$70,000 in 2000 as a result of the 2% rise in income from tourism revenue, licenses, permits and patents. This will make the DPNG less dependent on private external funds and balances carried over from previous years. The income from fines is extremely low, reflecting insufficient control over productive activities, particularly the fishery. On the other hand, income from financial investments is the directorate's second-largest source, after the earnings it obtains from licenses.
- 4.15 Trends in the number of visitors to the park suggest that the DPNG will be able to maintain its income in the medium and long terms. If there are about 60,000 visitors a year, and US\$5.5 million is collected in fees, the DPNG will receive about US\$2.5 million, to which an additional 10% (US\$550,000) of the total income assigned to SICGAL and the Ecuadorian Navy should be added. The local counterpart for the program will come from these funds. This income level will amply cover the operating requirements of Directorate of Galapagos Protected Areas and the counterpart. **The borrower undertakes, within the first 90 days of each fiscal year, to present evidence to the Bank that it has set aside funds solely to cover the local contribution. It also undertakes to obtain the Bank's nonobjection to investments over US\$500,000 a year financed with funds from the fee paid by tourists to visit the park.**

3. Galapagos municipalities

- 4.16 The Galapagos municipalities are responsible for drawing up plans for zoning and land use in their jurisdictions. Their functions also include the construction of sanitary infrastructure, potable water and sewer systems, treatment of bilge and

wastewater, solid waste management and establishing regulations for pollution control.

- 4.17 The municipalities manage government resources under the Municipal Regime Law while the Galapagos Special Regime Law grants them 20% of the entrance fee to the park. The total annual budget of the three municipalities in 1998 was US\$3 million. However, they use an excessive portion of these funds, which are supposed to be for operating costs, to cover administrative expenditures. They do not recover the costs of providing public services, which have to be subsidized. Collection levels are not sufficient owing to the weaknesses and scant technical base of rate systems.
- 4.18 Revenue management, particularly funds coming from the central level and other sources, has not been effective enough and municipal collection levels are low, with the result that not enough funds are available when they are needed. The municipalities do not have a lot of experience in managing loans. However, some projects are being prepared that plan to use credits to provide basic services. Only the municipality of Santa Cruz has applied for credit to the Ecuadorian Development Bank (BEDE) (a government agency that lends money to finance municipal services projects) but it has still not complied with the conditions for access to this source. That municipality has also been working to obtain credits under the protocol between the Ecuadorian government and the Spanish government.
- 4.19 Under current legislation, the municipalities are required to pay debt service on the projects they execute. Their borrowing capacity is conditional upon the funds they are allowed to put up to back their loans. The BEDE's lending policies allows the municipalities to use up to 50% of their income as guarantees and if the income assigned to the Galapagos municipalities under the Special Regime Law is included (the largest source of income), their limited capacity to finance large-scale projects becomes clear. Part of the program is intended to strengthen the capacity of the Galapagos municipalities to boost their revenues, thus increasing their borrowing capacity.
- 4.20 The annual income of 20% of the fees for visiting the park assigned to the municipalities is an estimated US\$530,000 for Santa Cruz, US\$373,000 for San Cristóbal and US\$197,000 for Puerto Villamil. That income will guarantee that they can provide the local contribution for permanent basic sanitation works.

V. PROJECT FEASIBILITY

A. Technical feasibility

- 5.1 The proposed activities and works can be executed without great difficulty by the DPNG, the Ecuadorian Agricultural Health Service and the three Galapagos municipalities. The works require standard engineering techniques and Ecuadorian and foreign companies have the necessary experience to carry them out.
- 5.2 The activities in the subprogram to support management of the marine reserve are based on methodologies for the comprehensive management of marine and coastal resources that have been successfully used in the Galapagos, other parts of Ecuador and different countries. Furthermore, users of the marine reserve are taking a number of steps that have helped to create favorable conditions for the project. A reserve management plan and provisional zoning have been agreed to by all the parties. Progress has also been made in developing legislation to support the Special Regime Law, particularly regarding management of the marine reserve. A series of current and future initiatives that are complementary to the proposed project have been designed to protect the archipelago's biodiversity and promote its sustainable development.
- 5.3 The subprogram to support the inspection and quarantine system includes a set of activities that will not demand extremely complicated techniques. They are complementary to the actions being taken under the program for comprehensive control of exotic species being financed by the GEF. The infrastructure works for the minor facilities and their designs and execution are very simple.
- 5.4 The emergency basic sanitation works do not demand complicated techniques or execution mechanisms and the country has the experience and capacity to build them.

B. Environmental and social feasibility

- 5.5 Profile II and the ESIB were presented and approved by CESI/TRG on 31 October 1997 and the project report was approved on 22 September 2000. Since the components are aimed at reverting or controlling environmental degradation in the archipelago, the overall environmental impact of the project will be positive.
- 5.6 The component for management of the marine reserve is expected to generate major environmental benefits through better protection for marine and coastal habitats and species. The combined effects of the zoning plan, full registration of fisheries with restricted access and participative management and control mechanisms will favor the recovery of fish stocks, a reduction in the by-catch and an easing on pressure on fragile ecosystems such as coral reefs, shoals and

mangrove swamps. The following features have been incorporated into the monitoring activities in order to periodically verify the impact of this component: (i) establishment of and respect for zones where fishing is banned; (ii) stabilization of the number of fishermen and the number and size of their boats; (iii) reduced by-catch (sea birds and shark); (iv) a reduction in illegal fishing; and (v) broader coverage of reserve management activities (e.g. biological monitoring, control and surveillance).

- 5.7 The inspection and quarantine component will also create environmental benefits, since it will protect land, marine and coastal biodiversity of world-wide importance because it is so highly endogenous. The establishment of a better system of barriers at ports and airports will significantly reduce the risks of the introduction and spread of exotic species that threaten native plants and animals. Environmental indicators have been incorporated into monitoring activities, including the number of interceptions at entry points.
- 5.8 The emergency environmental sanitation works (solid waste management, provision of potable water and sewerage) will have positive environmental impacts. Environmental benefits will accrue from the reuse and recycling of solid waste and the closure of dumps that are not efficiently managed and which constitute a focus for the spread of exotic species. The final designs for permanent basic sanitation works will allow headway to be made in the delivery of services that will solve pollution problems in populated areas and keep the beaches clean.
- 5.9 The program will generate social benefits through more effective participation by groups of users of the marine reserve in decision making and will help reduce intersector tensions (particularly between in-shore fishermen and tour operators). Social benefits will also accrue from the environmental training and education activities, which will help strengthen the islanders' cultural identity and social fabric. The environmental sanitation component will create substantial social benefits in terms of better public health.

C. Economic feasibility

- 5.10 The analysis of the economic feasibility of the subprogram to support management of the marine reserve is based on determining the costs and benefits of banning in-shore fishing in 23% of the reserve.

1. Cost for the in-shore fishery

- 5.11 There is the opportunity cost that in-shore fisheries will cease to receive – at least in the short and medium terms¹⁰ – represented by the income they obtain in the zone where fishing will be banned under the zoning to be supported by the Bank loan.
- 5.12 To estimate these costs for the in-shore fishery, it was necessary to obtain the following information: (i) the number of fishermen operating in the marine reserve; (ii) their annual income from fishing; (iii) the number of days they fish each year; and (iv) the number of days in which they would be unable to fish each year. The information for point (i) was obtained from reports on the in-shore fishery in Galapagos. The information for points (ii) and (iii) was obtained from direct interviews with fishermen. The information for point (iv) was an extrapolation of the results of the change in the behavior of fishermen in other fisheries when their access to part of the marine resources was closed.
- 5.13 Using that information, in the worse-case scenario (where the fish stocks do not recover), the in-shore fishery in Galapagos would lose about US\$325,000 a year at the outset although over the life of the project revenue would be positive. This figure assumes that the sea cucumber fisher would remain sustainable and that the number of fishermen is the number of economic agents whose main source of income is fishing. To counter these losses in the short and medium term, the program provides for a series of tools to compensate the island's in-shore fishing industry such as the development of fisheries outreach programs, support for recovery of traditional fisheries, identification of economic alternatives to fishing, and establishment of a conservation and marketing facility for fisheries products (paragraphs 2.7 and 2.8).

2. Benefits

- 5.14 A questionnaire administered to 367 tourists established that foreign tourists would be willing to pay an entry fee to the park averaging US\$53 and national tourists would be willing to pay US\$6.36, if it could be assured that the current condition of the archipelago's marine ecosystems would be maintained in future through management and control in the marine reserve. With 65,000 tourists visiting the islands each year, the total amount would be US\$2,745,000. Rather than reflecting a use value, this figure is an indicator of the value that tourists attach to the mere existence and protection of the marine ecosystems in the Galapagos. These figures

¹⁰ In the very long term, starting five years after the project is completed, it is possible that the stocks of fish and other species will recover strongly in restricted access zones, some of which could be transferred to zones where fishing is allowed, which will produce benefits for fishermen in the form of reduced fishing effort. However, since no reliable information is available on recovery rates of the stocks, it is impossible to predict the size of the recovery or its benefit value. Accordingly, the worst case economic analysis only considers the costs to the fisheries sector and not the potential long-term benefits.

represent potential benefits for the local and national economy that could be captured through a modification of PNG entry rates.

- 5.15 There are other benefits associated with the marine reserve's function as a reservoir for fish stocks. It provides an insurance policy against possible mistakes or overfishing in the zones where fishing is permitted. For example, if certain key stocks were to be fished out in those zones, the protected areas could provide shelter for them, allowing them to recover and repopulate the affected zones, thereby making it possible to continue fishing. Although no economic value can be placed on this environmental service performed by the marine reserve, there is a consensus among the international scientific community about the importance and value of protected marine areas as a reservoir of marine resources that are key in economic and ecological terms.
- 5.16 In short, the proposal to support the application of zoning in the marine reserve, which includes the establishment of areas where all fishing is banned, would entail relatively low costs and relatively high benefits in the worst-case scenario. In other words, the program supports a management plan that more than satisfies the requirements of a cost-benefit analysis in the short and medium terms. In the long term, the net benefits would be even higher, since after the fifth year, there will be growth in fish stocks and other commercial species.¹¹

D. Financial feasibility

- 5.17 The financial feasibility of the subprograms to support management of the marine reserve and the inspection and quarantine system is assured from the standpoint of the local counterpart. The compulsory allocation under the Law establishing the Special Regime for the Galapagos of funds to the DPNG and SICGAL, and the fact that those funds do not come from the national treasury account, ensures that counterpart funds will exist and allows for discretion in their management. The DPNG's projections revenue and expenses ensure that there will be enough to finance the recurrent costs of the program (US\$500,000). The revenue estimates are based on the conservative assumption that the number of visitors to the PNG would stabilize around 60,000, in which case revenue would amount to US\$3.45 million. The recurrent costs now stand at US\$1.521 million whereas additional project recurrent expenses amount to US\$500,000. Once recurrent costs have been lowered on both fronts, the DPNG will have US\$1.429 million for investment, which would cover the DPNG requirements (see table 5.1).

¹¹ In a 15-year scenario that includes recovery of key fish stocks by 33% over their original levels, the net benefits for fishermen are greater than their short- and medium-term sacrifices during the first five years. In this scenario, the program would pass the cost-benefit analysis, even excluding the additional US\$2,745,000 a year that foreign and Ecuadorian tourists would be willing to pay (see Annex V-1, Scenario II).

Table 5.1
GALAPAGOS NATIONAL PARK
PROJECTED AVERAGE ANNUAL REVENUE AND EXPENSES (US\$)

REVENUE	3.450.000
Taxes under Special Regime Act	2.750.000
PNG (45% of US\$5.5 million)	2.475.000
SICGAL (5% of US\$5.5 millions)	275.000
Patents from tourist operations	400.000
Foreign vessel permits	300.000
EXPENSES (less investments)	2.020.940
Recurrent expenses	1.520.940
Payroll	532.500
Current expenses	670.140
Other expenses	318.300
Incremental recurrent expenses	500.000
Payroll	300.000
Other expenses	200.000
Balance available for investment	1.429.060

Source: Galapagos National Park (PNG)300.000

E. Risks, problems and attenuating factors

- 5.18 **Risk**: The interests of certain users of the Galapagos Marine Reserve may lead them to oppose the change to a participative management system that places greater emphasis on resource conservation rather than free exploitation. **Attenuating factors**: Support is being provided for fuller participation by in-shore fishermen in decisions affecting the reserve and support will be provided for alternative economic activities to the fishery.
- 5.19 **Risk**: The host of cooperation and financing initiatives to protect Galapagos ecosystems and promote the sustainable use of its natural resources creates the risk that efforts and resources might overlap and make it difficult to achieve complementarity and synergy among the different initiatives. **Attenuating factors**: As part of the program's institutional strategy, a permanent unit (UCIGAL) is being consolidated within the Ministry of the Environment that will take charge of coordinating the different actions to benefit the archipelago.

**GALAPAGOS ENVIRONMENTAL MANAGEMENT PLAN (EC-0134)
LOGICAL FRAMEWORK**

NARRATIVE	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	MAIN ASSUMPTIONS
OBJECTIVE Reverse environmental degradation of the islands.	1.1 The rate of degradation of land and marine ecosystems slows and stocks of key species (e.g. sea cucumber and lobster) remain stable or recover.	1.1 Monitoring of marine and land environmental variables, including biological monitoring.	1.1 The government develops and applies the regulations of the Special Regime for Galapagos.
POSES MANAGEMENT OF THE MARINE RESERVE (RMG) Support effective implementation of the management plan for the RMG and contribute to the sustainable use of resources and conservation of marine and coastal environment.	1.1 Population dynamics of key species are known by the end of 2004. 1.2 Permanent protection zones are determined by the end of 2002. 1.3 The number of fishermen with rights and responsibilities in the RMG is determined by the end of 2001.	1.1 Research, monitoring and evaluation reports. 1.2 Social and policy monitoring. 1.3 Reports by JMP and AIM.	1.1 The government establishes a consistent, long-term policy to grant access to resources to local in-shore fishermen established in the Law of the Regime.
PREVENTION AND QUARANTINE Complement efforts to reduce the introduction and spread of exotic species, pests and diseases that threaten biodiversity in the Galapagos.	2.1 Number of species introduced is reduced by 10% a year starting in January 2002.	2.1 Monitoring reports from the Charles Darwin Scientific Station.	2.1 The Ministry of Agriculture applies a stable policy to remove first barriers in the system and Guayaquil.

NARRATIVE	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	MAIN ASSUMPTIONS
POSES (continued))			
<p><u>INSTITUTIONAL COORDINATION AND MANAGEMENT</u></p> <p>strengthen coordination capacity develop management mechanisms in the DPNG, JMP, the three Galapagos municipalities and UCIGAL.</p>	<p>3.1 The DPNG's marine reserve management unit is fully operational by June 2002.</p> <p>3.2 The strategic, commercial and financial plans of the municipalities are in operation by December 2002.</p> <p>3.3 80% of documents for the new program and project to benefit the archipelago include an analysis of gaps in cooperation and a map of cooperators by January 2000.</p> <p>3.4 INGALA keeps immigration control records starting in December 2001.</p>	<p>3.1 Annual DPNG reports.</p> <p>3.2 Activities reports by the municipalities.</p> <p>3.3 UCIGAL reports and program and project documents from bilateral, multilateral and private cooperation agencies.</p> <p>3.4 INGALA reports</p>	<p>3.1 The government continues the policy for participatory management on RMG management.</p> <p>3.2 The National Galapagos (INGALA) prepares a plan that reflects participatory management policies.</p>
<p><u>ENVIRONMENTAL MITIGATION STUDIES AND EMERGENCY WORKS</u></p> <p>enable the Galapagos municipalities to gain access to services for basic services.</p>	<p>4.1 Viable alternatives for delivery of water supply and sewerage system are established in December 2001 and implementation plan ready</p>	<p>4.1 Technical reports from municipalities</p>	<p>4.1 The government applies the policy to limit migration to the archipelago in order to limit growth in basic services.</p>

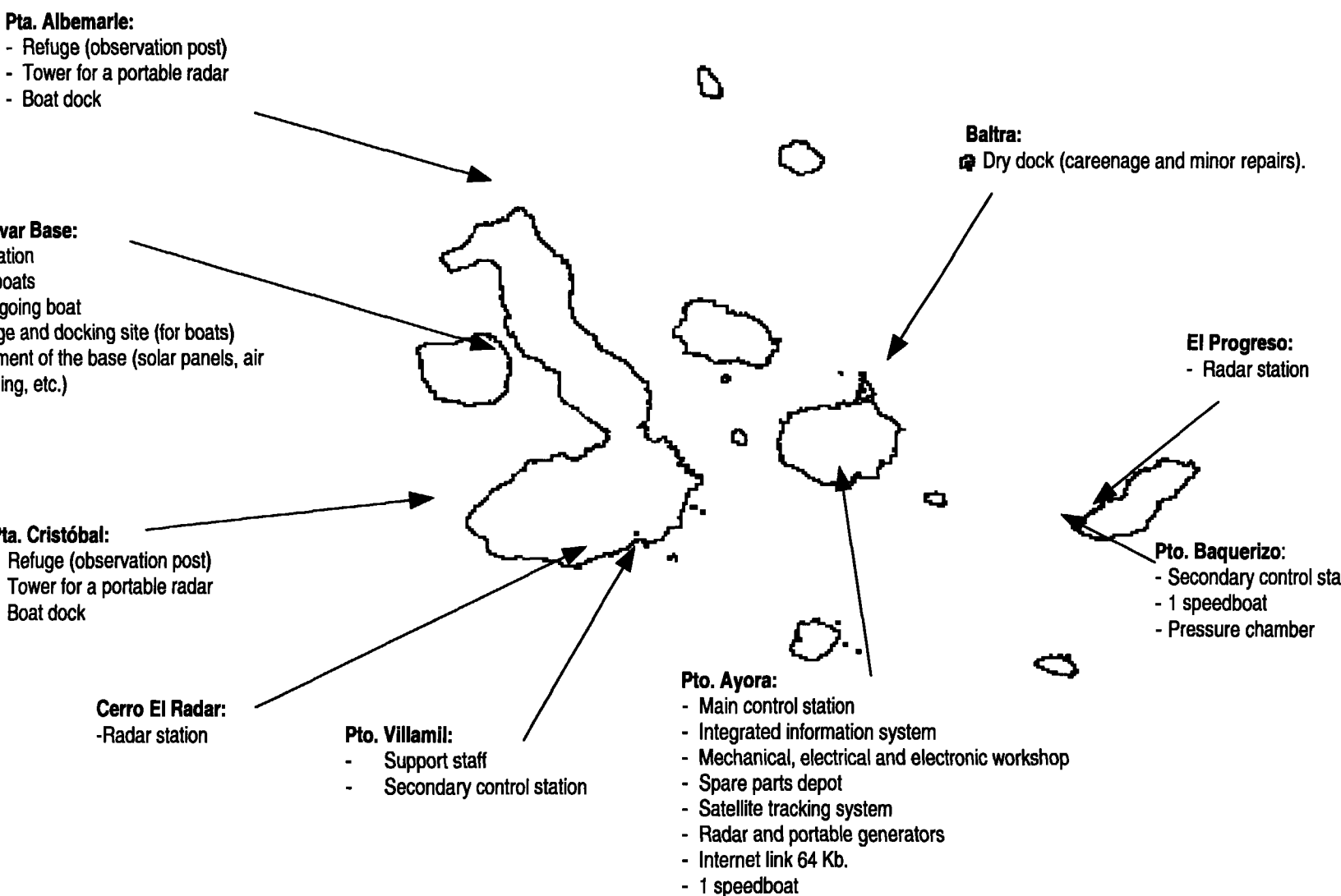
NARRATIVE	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	MAIN ASSUMPTIONS
LTS			
<p><u>MANAGEMENT OF THE MARINE RESERVE</u></p> <p><u>NATURAL RESOURCE MANAGEMENT</u></p> <p>Permanent zoning. Effective participative management. Fisheries registry with reliable data. Acceptable limits on change defined for marine tourism sites. Fishing facility on Isla Isabela built and operating properly.</p>	<p>1a.1 The JMP approves permanent zoning in early 2002.</p> <p>1a.2 By the end of 2001, 100% of decisions on the opening and closing of fishing seasons and bans coincide with the life cycles of key stocks.</p> <p>1a.3 Easing of conflicts between the tourism and fisheries sectors.</p> <p>1a.4 The fishing schedule is approved in mid-2001 and special fisheries regulations are issued.</p> <p>1a.5 By the end of 2001, the number of fishermen and vessels is consistent with the most recent registry figures.</p>	<p>1a.1 Zoning map.</p> <p>1a.2 Minutes of the meetings of the JMP and the Charles Darwin Foundation.</p> <p>1a.3 JMP reports.</p> <p>1a.4 Minutes of AIM and JMP meetings and the Official Register.</p> <p>1a.5 Monitoring reports and fisheries register.</p>	<p>1a.1 The government is willing to enforce the rules.</p>
<p><u>MARITIME SECURITY AND CONTROL</u></p> <p>Remote detection system operating. Network of command and control stations. Increased capacity for rescue and interception.</p>	<p>1b.1 Interception and detection of offenders increases by 10% a year starting in 2002.</p> <p>1b.2 Patrolling and monitoring covers 90% of the RMG by the start of 2002.</p> <p>1b.3 Number of fatalities is reduced by 70% starting in 2002.</p>	<p>1b.1 Periodic reports by the DPNG and DIGMER.</p>	

NARRATIVE	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	MAIN ASSUMPTIONS
RESULTS (continuation))			
<p><u>MANAGEMENT OF THE MARINE RESERVE</u> (continuation)</p> <p><u>EDUCATION AND COMMUNICATIONS</u> User groups advocate conservation. Residents know the rules for the RMG. Higher value placed on the RMG on the national and international levels.</p> <p><u>RESEARCH AND MONITORING</u> Coordinated planning of research by the DPNG and the Charles Darwin Foundation. Level of scientific knowledge has improved and is used to manage the RMG.</p>	<p>1c.1 Attitudes and practices of users groups favor conservation of RMG resources.</p> <p>1d.1 Content of joint research plans starting in June 2002.</p> <p>1d.2 Population dynamics of key stocks are known as of December 2001..</p>	<p>1c.1 Surveys</p> <p>1d.1 Research plans.</p> <p>1d.2 Reports on population dynamics.</p>	<p>1c.1 The socioeconomic conditions remains relatively stable.</p>
<p><u>INSPECTION AND QUARANTINE SYSTEM</u> Inspection and quarantine system established and operating efficiently and permanently. Control infrastructure is operating. SICGAL has diagnostic capacity. Effective communications with the community.</p>	<p>2b.1 All of freight at airports and 80% of freight at ports is inspected by the end of 2002.</p> <p>2b.2 90% of banned products are intercepted by the end of 2002.</p> <p>2b.3 The volume of banned products carried by settlers is reduced by 10% a year.</p>	<p>2b.1 SESA-SICGAL reports.</p>	

NARRATIVE	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	MAIN ASSUMPTIONS
<p>INSTITUTIONAL COORDINATION AND MANAGEMENT DPNP, JMP, AIM Administrative systems designed, consolidated, regulated and operating. Development of roles, spheres of action and interrelations among the DPNP, JMP and AIM. Adequate provision of basic services with cost recovery.</p>	<p>3a.1 Monitoring and administrative and control system manuals ready by the end of 2001. 3a.2 Regulations and manuals of procedures ready by the end of 2001. 3b.1 Increases in annual internal cash earnings to permit full coverage of operating and maintenance costs starting in 2003.</p>	<p>3a.1 Periodic reports by the DPNP. 3a.2 Minutes of AIM and JMP meetings. 3b.1 Municipal accounting reports.</p>	<p>3a.1 Continuity in senior staff of the institutions for 5 years. 3b.1 The mayors attach priority to improving the quality of municipal management.</p>
<p>ENVIRONMENTAL SANITATION STUDIES AND EMERGENCY WORKS POTABLE WATER AND SEWERAGE Puerto Baquerizo and Puerto Williams: Water supply and sewer system studies Santa Cruz, Puerto Baquerizo, and Puerto Williams: repair of storage tanks, pipes, and pumping stations.</p>	<p>4a.1 Studies completed by December 2001. 4a.2 10% annual decline in number of user complaints.</p>	<p>4a.1 Technical report 4a.2 Municipal reports.</p>	

NARRATIVE	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	MAIN ASSUMPTIONS
<p>RESULTS (continuation))</p> <p><u>ENVIRONMENTAL IMPACT STUDIES AND EMERGENCY RESPONSE</u>(continuation)</p> <p><u>SOLID WASTE</u></p> <p>Santa Cruz, Puerto Baquerizo y Puerto Villamil: Clean up campaigns, closure of unauthorized dumps, user participation in waste management, reduction, reuse and recycling of waste and oils.</p>	<p>4b.1 80% of the total volume of waste is disposed of adequately by the end of 2002.</p> <p>4b.2 The volume of waste is reduced by 30% through reduction, reuse and recycling by the end of 2003</p>	<p>4b.1 Reports and field inspections</p> <p>4b.2 User surveys.</p>	

Component 2 (Control, security and rescue system) General distribution of the investment in equipment and infrastructure



GALAPAGOS ENVIRONMENTAL MANAGEMENT PROGRAM (EC-0134)

TENTATIVE BID TIMETABLE

MAIN PROCUREMENTS	BANK CONTRIBUTION (%)	METHOD	PREQUALIFICATION	AMOUNT (US\$ THOUSANDS)	DATE OF PUBLICATION (SEMESTER)
Goods					
Security and control					
Detection and communications	100	ICB	YES	940	2001/II
Vessels	100	ICB	NO	440 ¹	2001/II
Computers and software	100	ICB	NO	430 ²	2001/II
Miscellaneous	100	ICB	NO	310 ³	2001/II
Inspection and quarantine					
Communications	100	LCB	NO	200	2001/II
Inspection	100	ICB	NO	326	2001/II
Vehicles	100	LCB	NO	66	2001/II
Consulting services					
Engineering (designs and supervision)	100	LCP	NO	100	2001/I
Contracting agency	100	LCP	NO	150	2001/I
Administration/auditing (two lots)	100	ICP	YES	400	2001/I

¹ Includes US\$40,000 for boats for the inspection and quarantine subprogram.

² Includes US\$203,000 for equipment and software for UCIGAL, DAPG, municipalities, UGAFIP and components for resource management, education and training, research and monitoring and inspection and quarantine.

³ Includes a pressure chamber, sighting equipment, solar panels, desalinating plants and US\$48,000 for the research and monitoring component (heat salinometers and microscopes).

MAIN PROCUREMENTS	BANK CONTRIBUTION (%)	METHOD	PREQUALIFICATION	AMOUNT (US\$ THOUSANDS)	DATE OF PUBLICATION (SEMESTER)
Development DAPG-JMP	100	LCP	NO	100	2001/I
Municipal development	100	LCP	NO	120	2001/II
Consulting services (continuation)					
Natural resource management	100	ICP	YES	654	2001/II
Maritime security and control	100	ICP	YES	620	2002/I
Environmental education	100	LCP	NO	195	2001/II
Research and monitoring	100	ICP	YES	616	2001/II
Workshops (several lots)	100	LCP	NO	400	2001/I
Feasibility studies for water, sewerage and solid waste	100	LCP	NO	100	2001/II
Works and improvements					
Three CEA buildings and fisheries facility	100	LCB	NO	149	2001/II
Observation facilities, bases, workshop, dry dock, pressure chamber and quarantine facilities	54.5	LCB	NO	550	2001/II
Potable water and sewerage systems: three packages (one for each municipality)	80	LCB	NO	750	2002/I
Solid waste management systems: three packages (one for each municipality)	80	LCB	NO	200	2001/I

International competitive bidding

Local competitive bidding

Local call for proposals

International call for proposals

PROPOSED RESOLUTION

ECUADOR. LOAN ____/OC-PE TO THE REPUBLIC OF ECUADOR

(Environmental Program for the Protection of the Galapagos Islands)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Republic of Ecuador, as Borrower, for the purpose of granting it a financing to cooperate in the execution of the Environmental Program for the Protection of the Galapagos Islands. Such financing will be for the amount of up to ten million four hundred thousand United States of America dollars (US\$10,400,000, from the Single Currency Facility of the Ordinary Capital resources of the Bank, and will be subject to the "Terms and Financial Conditions" and the "Special Contractual Conditions" indicated in the Executive Summary of the Loan Proposal.

PROPOSED RESOLUTION

ECUADOR. PARTIAL PAYMENT OF INTEREST ON LOAN ____/OC-EC TO THE
REPUBLIC OF ECUADOR

(Environmental Program for the Protection of the Galapagos Islands)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, as administrator of the Intermediate Financing Facility Account, hereinafter referred to as the "Account", to enter into such contract or contracts as may be necessary with the Republic of Ecuador, as Borrower, and to adopt other pertinent measures to use the resources of the Account to pay the interest due by the Borrower on outstanding balances of up to ten million four hundred thousand United States of America dollars (US\$10,400,000) of the loan authorized by Resolution DE-____/00, in accordance with the provisions set forth in Document FN-263-2, as amended, approved by the Board of Executive Directors on December 21, 1983 and its modifications."