



**USAID | ECUADOR**

**USAID SUSTAINABLE FORESTS AND COASTS**  
IMPROVING LIVELIHOODS BY CONSERVING BIODIVERSITY



# FY 12 DETAILED WORK PLAN

OCTOBER 2011 - SEPTEMBER 2012

**USAID SUSTAINABLE FORESTS AND COASTS**

**October 6, 2011**

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# TABLE OF CONTENTS

1.1 Project Goals .....	6
PIR 1: Biodiversity conservation in critical habitats improved.....	7
PIR2: Local livelihoods improved .....	7
PIR 3: Partnerships formed for ongoing support for biodiversity conservation .....	7
1.2 Geographic Target Areas.....	8
2. IMPLEMENTATION STRATEGY .....	10
2.1 Work Planning Process.....	10
2.2 Staffing Chart.....	11
3. WORK PLAN FRAMEWORK BY PIR, THREATS AND STRATEGIES .....	13
3.1 Implementation Framework Table.....	13
3.2 Work Plan Activity Narrative Description.....	15
PIR 1: Biodiversity conservation in critical habitats improved.....	15
Threat 1: Loss or alteration of critical habitats .....	15
Strategy 1.1: Improve management of critical terrestrial and coastal marine habitats .....	15
Strategy 1.2: Rehabilitate degraded habitats .....	19
Threat 2: Climate change.....	21
Strategy 2.1a: Support for the Sub-Secretariat of Climate Change at the National Level.....	21
Strategy 2.1b: Establish and implement climate change response and adaptation measures – local level.....	21
Strategy 2.2.: Reduction of greenhouse gases and carbon sink conservation .....	22
PIR 2: Improved Local livelihoods .....	22
Threat 3: Lack of economic alternatives .....	22
Strategy 3.1: Development and promotion of market-based economic alternatives and economic incentives for critical habitat conservation....	22
Activity 3.1.1 Facilitate access to environmentally responsible markets and support for microenterprise .....	22
Activity 3.1.2: Develop economic incentives for conservation.....	23
Activity 3.1.3 Support accessing and maintaining Socio Bosque's incentives.....	24
Activity 3.1.4.: Strengthen value chains that promote biodiversity conservation .....	24
PIR 3 Partnerships formed for ongoing support for biodiversity conservation .....	25
Threat 4: Insufficient institutional capacity for biodiversity conservation .....	25
Strategy 4.1 Strengthen management of protected areas .....	26
Strategy 4.2.: Improve inter-institutional communication and coordination .....	27
Strategy 4.3.: Public policy advocacy .....	29

4 . WORK PLAN BY GEOGRAPHIC AREA.....	31
1) Gran Reserva Chachi and its buffer zone .....	31
2) Reserva Marina Galera San Francisco and watersheds of the Galera San Francisco Peninsula.....	32
3) Parque Nacional Machalilla and Ayampe River Watershed .....	33
5) Chongón Colonche Mountain Range .....	39
6) Guayas Province.....	40
5. CROSS-CUTTING ACTIVITIES.....	41
6. ENVIRONMENTAL COMPLIANCE .....	41
ANNEX 1: ILLUSTRATIVE FY12 BUDGET .....	43

## ACRONYMS

PA	Protected Area
PF	Protection Forest
C&D	Conservation and Development
DIRNEA	National Bureau of Aquatic Spaces
ECAs	Field Schools
FECCHE	Federación de Centros Cháchis de Ecuador (Ecuadorian Federation of Cháchi Communitites)
FRA	Fichas de Revisión Ambiental (Environmental Review Worksheet)
FY	Fiscal Year
INAR	Instituto Nacional de Riego (National Irrigation Institute)
INP	Instituto Nacional de Pesca (National Institute of Fisheries)
MAE	Ministerio de Ambiente (Ministry of Environment)
MAGAP	Ministerio de Agricultura, Ganadería, Acuacultura y Pesca (Ministry of Agricultural, Livestock, Aquaculture and Fisheries)
MINTUR	Ministerio de Turismo del Ecuador (Ministry of Tourism of Ecuador)
PIR	Project Intermediate Results
PN	Parque Nacional (National Park)
POAM/ELUP	Plan de Ordenamiento Ambiental (Environmental Land Use Plan)
PNM	Parque Nacional Machalilla (Machalilla National Park)
RE	Reserva Ecológica (Ecological Reserve)
RM	Reserva Marina (Marine Reserve)
RVS	Reserva de Vida Silvestre (Wildlife Reserve)
SENAGUA	Secretaría Nacional del Agua (National Secretariat on Water)
SIGA	Sistema de Información de Gestión Ambiental (Environmental Management and Information System)
SNAP	Sistema Nacional de Áreas Protegidas (National System of Protected Areas)
USAID	United States Agency for International Development

## EXECUTIVE SUMMARY

In October 2009, USAID approved a three-year work plan for the USAID Sustainable Forests and Coasts project, which contained a detailed description of the activities and key actions planned for Fiscal Year 2010 (FY10) and a general overview of the activities for FY11 and FY12. The present detailed work plan for FY12 presents specific strategies, activities and key actions for implementation in FY12.

In FY12, the Project will continue to consolidate its initiatives from previous years, together with the Ministry of the Environment (MAE) and USAID Ecuador. Project technical assistance will continue to focus on the following four geographic areas from previous years, which were prioritized based on their importance for biodiversity:

- 1) Gran Reserva Chachi and its buffer zone
- 2) Reserva Marina (RM) Galera San Francisco and related watersheds
- 3) Parque Nacional Machalilla (PNM) and the Ayampe River watershed
- 4) Gulf of Guayaquil (including the Reserva Ecológica Manglares Churute, the Reserva de Producción de Fauna Manglares El Salado and mangrove concessions)

In addition, this year the Project plans to include the following:

- 5) Bosque Protector (BP) Chongón Colonche: the mountain range that extends 95km east to west inland from the coast. Chongón Colonche was declared a protection forest in 1994.
- 6) Guayas Province, with a climate change strategy to support the provincial government.

The project developed this work plan using a participatory approach, gathering information on needs and priorities through strategic consultations with a wide range of stakeholders in each geographic area. Stakeholders consulted included local government authorities, MAE and MAGAP authorities, USAID, protected area managers, community members, and NGOs, among others.

Key to developing this work plan was the close partnership the Project has developed with the MAE from the outset. This close relationship is due, in part to the project's ongoing support for the MAE's conservation efforts, particularly the National System of Protected Areas (SNAP for its Spanish acronym) and technical assistance for the government's programs and policies.

The Project's implementation strategy is based on providing the **technical assistance** needed to reduce threats to biodiversity conservation in these priority areas, and particularly in protected areas. Just as in past years, in FY12, these threats, and the strategies designed to minimize them, are presented in alignment with the Project's Intermediate Results (PIRs)

In response to PIR 1 (improve biodiversity conservation in critical habitats), in FY12, the Project will implement activities under the strategy for **minimizing the loss and/or alteration of habitats**, including remnants of high biodiversity areas, through improved management and rehabilitation of critical terrestrial and coastal marine areas (especially in habitats located in government protected areas), public policy advocacy, and **climate change** adaptation measures.

In response to PIR 2 (improve local livelihoods), the project's principal mandate is biodiversity conservation in critical coastal marine areas. The ecosystems in these areas are fragile and constantly threatened by expanding agricultural and livestock frontiers. The project has to be careful not to promote economic activities that, while they might boost incomes in the short term, contribute to the destruction of the resource base in the medium and long terms. From this standpoint, the project will prioritize activities that ensure the sustainable use of the resource base for commodities in the value chain. Some examples of this are monitoring red crab stocks to ensure their sustainable harvesting, and surveillance and control for the protection of mangroves, which are the resource base for the red crab value chain that generates some USD \$65 million for over 4,000 families. Another example is improving incomes through the application of improved forest resource extraction methods, the application of best practices in natural resource management, and access to economic incentives such as Socio Bosque.

The main strategy in response to PIR 3 (partnerships formed for ongoing support for biodiversity conservation) will center on empowering the MAE, local governments, grassroots organizations (such as FECCHE), and other institutions (such as the National Institute of Fisheries) to play a leadership role in conservation coalitions promoted by the Project and establishing/improving relations with other donors and USAID projects with a view to ensuring complementarity of efforts and maximizing impacts. In order to improve an environment conducive to biodiversity conservation and the proper management of natural resources, the Project will continue to provide technical assistance on environmental policy to the MAE, following up on its support for the inclusion of the draft Forestry Law in the Environmental Code, regulatory modifications of the Biodiversity Chapter [Libro de Biodiversidad], and the reworking of key chapters on Climate Change and Environmental Services, including the rationales for them. One of these develops Article 74 of the Constitution interpreting ownership [apropiación] of environmental services, without which the whole issue of environmental services would be very difficult to set up and manage and the other is on deforestation and degradation that has been avoided, as a minimum basis for the entire REDD+ system currently being developed.

In FY12, the Project will continue to adhere to USAID's environmental regulations through the procedures set out in the Environmental Review Worksheets and dictated by the approved Environmental Assessment. It will also submit a revised Performance Monitoring Plan by December 30<sup>th</sup>, 2011 in accordance with revisions mandated by Modification 04 of the Task Order and to include targets for FY13.

## 1. INTRODUCTION

The objective of the USAID Sustainable Forests and Coasts Project is to promote biodiversity conservation in critical habitats on the Ecuadoran Coast by improving the livelihoods of local residents. The project goes thru June 2014 although the last year (June 2013- 2014) remains an option year and will require execution on behalf of USAID.

The present work plan takes into consideration the lessons learned during the first two years and focuses on consolidating the activities carried out thus far. The activities planned are geared towards concentrating and focusing efforts in order to consolidate the results obtained to date.

The Project has designed its activities and results to take into account gender and promotes opportunities for men and women to participate in and benefit from the Project.

This work plan is divided in the following six (6) sections:

Introduction (1) includes (1.1) the project's goals—archived and expected—a (1.2) the geographic areas selected by the Project to work in the FY12.

Section 2 presents the Project's implementation strategy, including an explanation of the methodology and the process to design this Work Plan (2.1 Work Plan Process), including the new staffing chart (2.2), which has been adapted to meet the needs of the Project's implementation strategy.

Section 3 presents the implementation framework for FY12 and the Implementation Framework Table (3.1), which summarizes the threats, strategies, and activities by PIR.

Section 4 (Work Plan by Geographic Area) presents the work plan's activities and key actions by geographic area.

Section 5 presents cross-cutting activities (including Communications), and Section 6 explains how in FY12 the Project will continue complying with USAID environmental regulations through Fichas de Revisión Ambiental (FRA) or Environmental Review Worksheets, according to the Environmental Assessment (EA). Annex 1 presents an illustrative FY12 budget.

### 1.1 Project Goals

A description of each PIR, its goals and a summary of the progress made thus far and goals for FY12 is presented in the sections below:

## PIR 1: Biodiversity conservation in critical habitats improved

PIR 1's overarching objective is biodiversity conservation. All Project activities tie into this PIR and address the need to conserve the last remnants of ecosystems and critical habitats on the Ecuadoran Coast.

Indicators	Cumulative Goals as of FY12
1.1. Number of hectares of terrestrial ecosystems in target areas under improved management	220,564
1.2. Number of hectares of marine ecosystems in target areas under improved management	135,188
1.3. Number of people trained in best management practices (BMP) for natural resources and along value chains	1700
1.4. Number of initiatives co-financed	20

## PIR2: Local livelihoods improved

The overall purpose of the USAID Sustainable Forests and Coasts Project is biodiversity conservation. However, because many of the primary threats stem from human pressures exacerbated by poverty and the lack of economic alternatives, the objective of PIR 2 is to reduce these threats by creating incentives for conservation and improving living conditions for local communities in and/or around critical ecosystems.

Indicators	Cumulative goals as of FY12
2.1. Number of organizations linked to new markets	16
2.2. Number of families that have increased their economic benefits	1700

## PIR 3: Partnerships formed for ongoing support for biodiversity conservation

This third PIR consolidates and promotes partnerships to leverage public and private funding for the sustainability of initiatives once the Project has ended.

Indicators	Cumulative Goals as of FY12
3.1. Leveraging of public and/or private funds	US\$ 2,600,000
3.2. Number of partnerships or coalitions created or strengthened	12
3.3. Number of policies, laws, agreements, or regulations that promote conservation and sustainable use of natural resources	4

At the policy level, the Project will continue providing technical support to the Ministry of Environment for drafting of a Forestry Law [Ley de Bosques] (National Forest Patrimony Chapter of the Organic Environmental Code), with the following expected deliverables:

- a) At least 6 technical studies carried out as a basis for developing an environmental policy and regulations.
- b) National Forestry Patrimony Chapter and regulations developed, including support to the MAE in consultations and consensus-building among key stakeholders.
- c) The final draft legislation sent to the National Assembly for consideration and adoption, and the relevant regulations drafted and sent to the MAE for consideration and adoption.
- d) Training sessions based on the contents of the National Forestry Patrimony Chapter and its regulations.

## 1.2 Geographic Target Areas

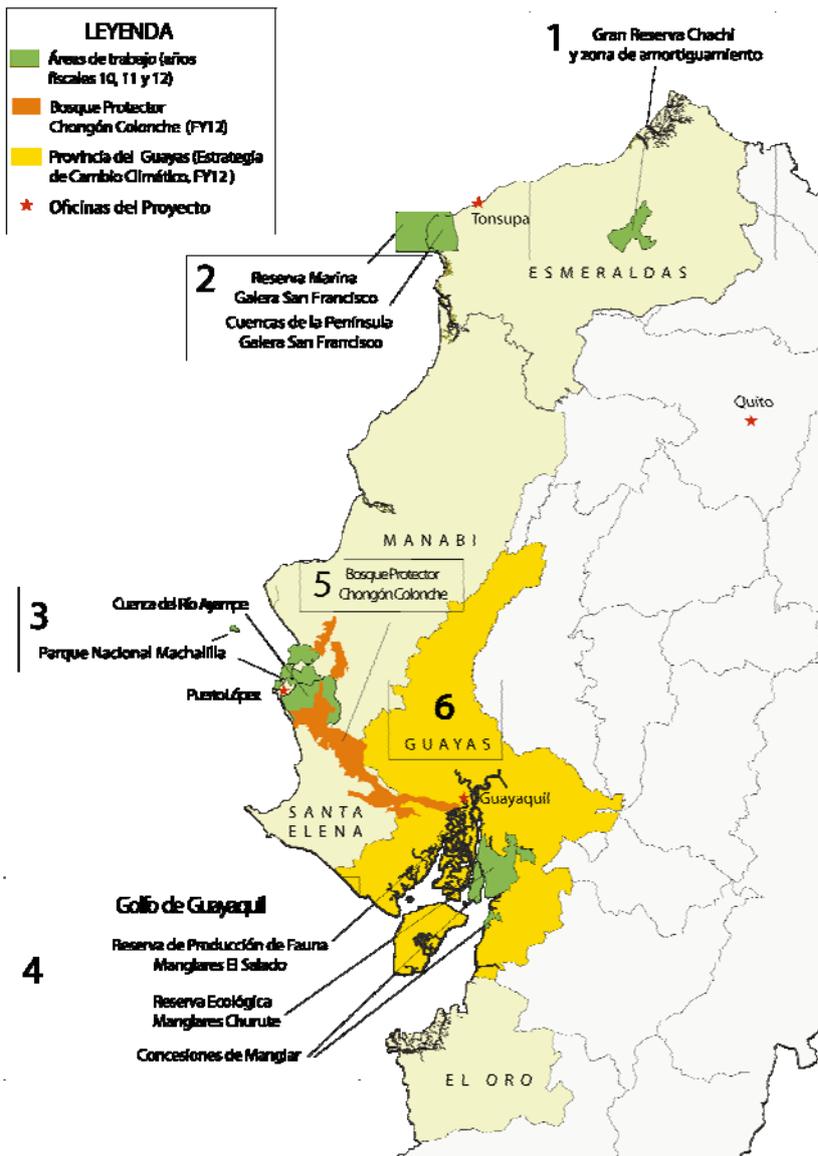
The Project will continue to consolidate its initiatives in the same areas the Project prioritized in FY11 together with the MAE and the USAID Environmental Team, which were selected for being critical to biodiversity conservation, as follows:

1. Gran Reserva Chachi and its buffer zone.
2. Reserva Marina Galera San Francisco and related watersheds
3. Parque Nacional Machalilla and the Ayampe River watershed.
4. Gulf of Guayaquil (which includes the Reserva Ecológica Manglares Churute, the Reserva de Producción de Fauna Manglares El Salado, and mangrove concessions)

In addition to the work areas for 2011, the Project plans to include:

5. Bosque Protector (BP) Chongón Colonche, located in the mountain range of that name, which extends 95 km along the coast east to west. The Chongón Colonche range was included in the work plan because it is a high biodiversity ecological corridor extending from western Guayaquil to Parque Nacional Machalilla. In this area, the Project will focus on promoting and facilitating access to Socio Bosque for biodiversity conservation and as a measure to conserve carbon sinks and prevent greenhouse gas emissions caused by deforestation.
6. In Guayas province (in addition to the Gulf of Guayaquil, where the project has worked for the past 2 years), the Project will work with the provincial government on the development of a Provincial Climate Change Strategy.

**MAPA DE LA COSTA CON AREAS DEL PROYECTO**



## 2. IMPLEMENTATION STRATEGY

The Project's implementation strategy remains focused on providing the **technical assistance** needed to reduce threats to biodiversity conservation in the six priority areas, and particularly in protected areas. These threats, and the strategies, objectives, and activities designed to minimize them, are presented below in alignment with the PIRs. The implementation strategy in FY12 also includes laying the groundwork for the sustainability of those results that should continue after Project end.

### 2.1 Work Planning Process

The Project developed this Work Plan using a participatory approach, gathering input on the needs and priorities thru strategic consultations with a wide range of stakeholders in each geographic area. Stakeholders consulted included local government authorities, protected area managers, community members, NGOs, MAE authorities, and USAID. Key to developing the work plan was the close partnership the Project had developed with the MAE since it began.

In addition, the Project's close working relationships with parochial, municipal and provincial governments in each of the target areas facilitated work plan development and will continue to facilitate Project implementation.

The FY12 Detailed Work Plan responds to requests from the Government of Ecuador, particularly the MAE, within its scope and target areas, as well as to requests from local and sectional governments. The Project is tied into the "*Plan Nacional del Buen Vivir*" (National Plan for Good Living) and supports MAE policies in particular. The planning process has taken into account the technical assistance needs requested by USAID and the MAE and specifically by the Sub-Secretariats of Coastal and Marine Management, Natural Patrimony and Climate Change.

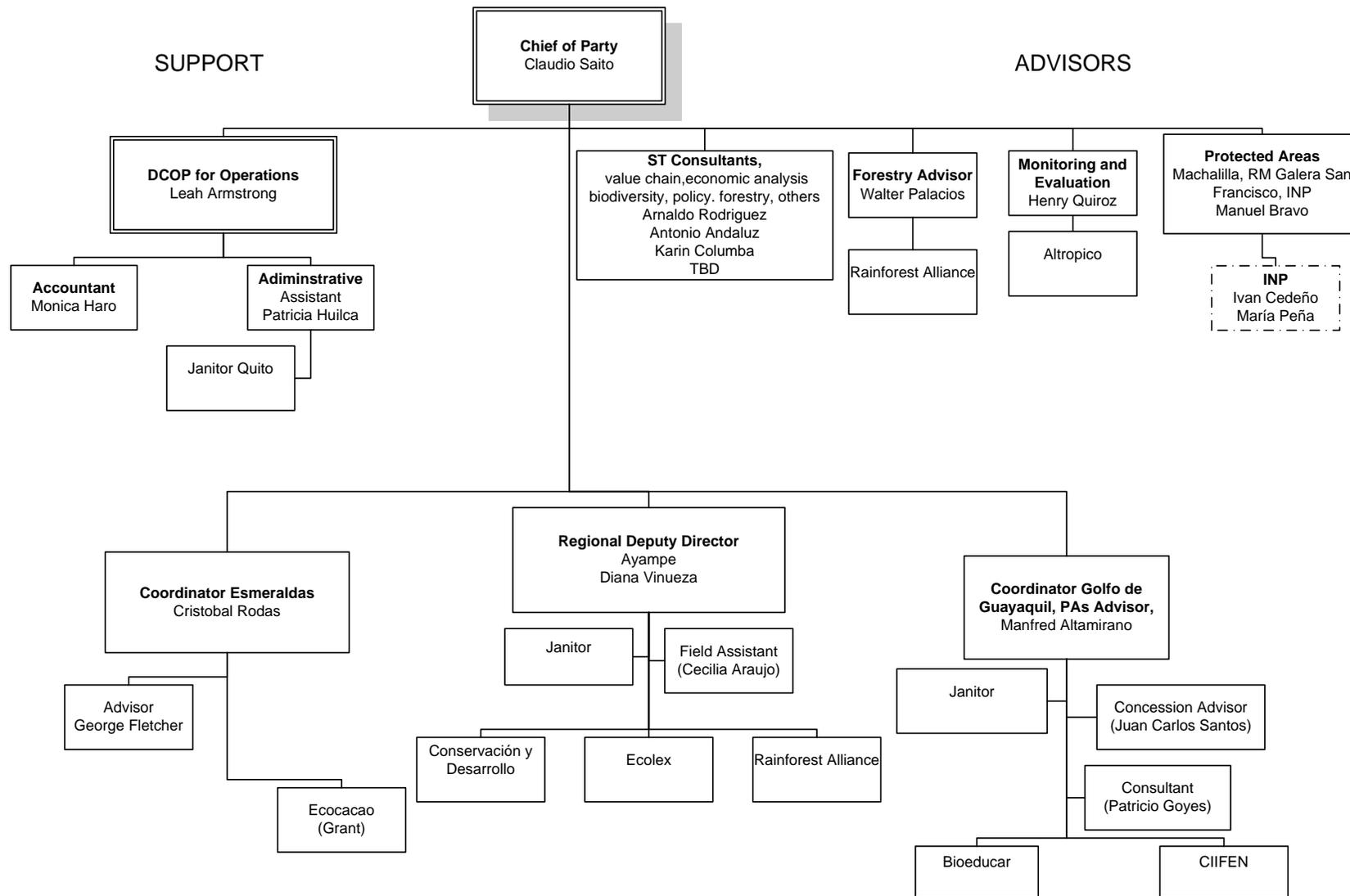
Primary threats were identified in conjunction with the MAE and technically defined through Environmental Land Use Plans (POAM for its Spanish acronym) [*planes de ordenamiento ambiental – POAM*] for the Ayampe River watersheds and watersheds affecting the Reserva Marina Galera San Francisco developed in FY10. The POAMs include key activities to reduce these threats.

The planning process for FY12 incorporated lessons learned from the first two years of implementation. The consultation process for developing this plan was participatory and worked through consensus: in July and August 2011, over 100 public and private sector and community stakeholders were interviewed. The planning process, which was undertaken in close coordination with the MAE and USAID and presented to MAE and USAID authorities on September 21<sup>st</sup>. Implementation will use an **adaptive management** approach, which will continue to facilitate any necessary changes along the way to ensure more effective activity implementation and results.

The Project had designed its activities and results to take into account gender equality, with equal opportunity for men and women who participate in and benefit from the Project.

## **2.2 Staffing Chart**

Bearing in mind the experiences gleaned from the first two years of work, the Project kept the same team structure as last year and has made the following staff changes: Leah Armstrong, took over as Deputy Chief of Party for Operations of the Project. The former Deputy Chief of Party, Arnaldo Rodríguez, requested to work as a consultant on specific tasks, and the Esmeraldas Regional Deputy Director will become the Regional Coordinator. The Project has also added 2 field assistants (Cecilia Araujo for PN Machalilla and the Ayampe River Watershed and George Fletcher for the Ayampe River Watershed and the watersheds of the Galera San Francisco Peninsula), and a Forests Coordinator (Walter Palacios).



### 3. WORK PLAN FRAMEWORK BY PIR, THREATS AND STRATEGIES

This section presents the implementation framework for FY12, which presents the threat, strategy for reducing the threat, and activities for each PIR. More detailed key actions are presented in the narrative section.

The first part of this section (3.1 Implementation Framework) describes the primary threats and strategies and their respective activities. Section 4 Work Plan by Geographic Area presents the work plan’s activities and actions by geographic target area, and includes the expected results, activities and key actions, implementation timeline, and the responsible staff or implementing partner.

#### 3.1 Implementation Framework Table

This section presents the implementation framework table, which summarizes with the threats, strategies, and activities by PIR.

PIR 1: Biodiversity conservation in critical habitats improved		
Threats	Strategies	Activities
1. Loss and/or alteration of critical habitats	1.1. Improve management of critical terrestrial and coastal marine habitats	1.1.1. Improve management of and information regarding timber and non-timber forest products and coastal marine resources 1.1.2. Promote forest management and conservation (timber and non-timber forest products) 1.1.3. Strengthen Mangrove/concessions management 1.1.4. Promote implementation of critical actions in the environmental management plan for the Ayampe River watershed and selected micro-watersheds of the Galera San Francisco Peninsula. 1.1.5 Promote protection of water source/riverbank vegetation
	1.2. Rehabilitate degraded terrestrial and coastal marine habitats	1.2.1. Promote reforestation/regeneration
2. Climate change	2.1. Establish and implement climate change response and adaptation measures	2.1.1. Implement adaptation measures to climate change
	2.2. Reduction of greenhouse gases caused by deforestation and carbon sink conservation	1.1.2., 1.1.3., and 1.2.1.

<b>PIR 2: Improved local livelihoods</b>		
<b>Threats</b>	<b>Strategies</b>	<b>Activities</b>
3. Lack of economic alternatives	3.1. Development and promotion of market-based economic alternatives and economic incentives for critical habitat conservation	3.1.1. Facilitate access to environmentally responsible markets and support for microenterprises
		3.1.2. Develop legal/economic conservation incentives
		3.1.3. Support accessing and maintaining Socio Bosque incentives
		3.1.4. Strengthen value chains that promote biodiversity conservation

<b>PIR 3: Partnerships formed for ongoing support for biodiversity conservation</b>		
<b>Threats</b>	<b>Strategies</b>	<b>Activities</b>
4. Insufficient institutional capacity for biodiversity conservation	4.1. Strengthen management of protected areas	4.1.1. Build institutional capacity
		4.1.2. Design and support implementation of surveillance and monitoring systems
	4.2. Improve inter-institutional communication and coordination	4.2.1. Strengthen coalitions/partnerships
		4.2.2. Obtain co-financing and/or leverage funds
	4.3. Public policy advocacy	4.3.1. Provide technical assistance to review and revise policies and programs related to biodiversity conservation and management.
		4.3.2. Technical and legal assistance for drafting the Forests Law

## 3.2 Work Plan Activity Narrative Description

The following section describes each of the threats, strategies, and activities presented in the above implementation framework table and presents a detailed description the corresponding activities and key actions planned for FY12. #

### PIR 1: Biodiversity conservation in critical habitats improved

#### Threat 1: Loss or alteration of critical habitats

The Ecuadoran Coast is a mosaic of habitats and ecosystems in a variety of orographic formations. However, only in the Gran Reserva Chachi and the Reserva Ecológica Cotacachi Cayapas does natural forest coverage remain. Most vegetation has been converted to productive activities including African palm, banana, and cacao plantations, short-cycle crops, livestock, or shrimp harvesting. Timber harvesting, which also has had a high impact on vegetation, is frequently the first step in the conversion of forests to agricultural systems. The main causes of unsustainable timber activity are the fragmentation of woodlands that precludes long-term management, the lack of effective enforcement systems and sales to illegal markets, and the lack of clarity over land tenure. According to estimates, only 31.6% (Sierra 1999, most recent data available) of the original coverage on the Coast remains. Other threatened habitats and ecosystems include coastal marine systems, wetlands and water sources.

#### Strategy 1.1: Improve management of critical terrestrial and coastal marine habitats

In FY12, the Project will continue to consolidate conservation and improved management practices for critical habitat remnants in the selected geographic areas. It will promote the rehabilitation of degraded habitats and engage in public policy advocacy to ensure that this is accomplished or is sustainable in the long term.

#### *Activity 1.1.1: Improve management of and information regarding timber and non-timber forest products and coastal marine resources*

Lack of information about the regenerative capacity of ecosystems and populations can result in resource extraction methods that exceed their capacity to recover. Coastal marine ecosystems are particularly sensitive in this regard (for example, red crab populations) as are woodland ecosystems (for example, tree populations with commercial potential or tagua palm). Absent this type of information, it is almost impossible to design and implement effective management systems or enforcement measures based on solid arguments for the beneficiaries of such activities. Properly implemented management systems ensure long-term natural resource production, the foundation for a sustainable value chain, and bring economic benefits to the populations that rely on those resources.

#### *Key actions for Activity 1.1.1*

The Project has planned the following actions in the Gulf of Guayaquil:

- In January 2011, the National Fisheries Institute (INP for its Spanish acronym) and mangrove concession holders from the Isla de Mondragón and RE Manglares Churute concessions, and the 6 de Julio, Balao and Nuevo Porvenir concessions signed an agreement and began fisheries monitoring and stock assessments of the red crab (*Ucides occidentalis*). This will continue throughout FY12. Since then, several more groups of crabbers have joined this effort. This assessment will facilitate policy development and decision-making to protect red crab populations upon which approximately 4,600 crabbers depend for an activity that generates approximately over USD 60 million annually in the Gulf of Guayaquil. The monitoring is historic as data is gathered by over approximately 435 crabbers on daily basis and include size (dimension of cethatorax), location, gender, tide conditions, and quantities of crabs captured. The crab association Presidents all report on overall crabbing efforts (number of crabbers worked). As a result of this study, the authorities and crabbers' associations will be able to manage this resource sustainably, and establish respective management policies. As part of the crab management effort, a coalition has been established comprising several crabber associations, the INP, and the Project. Other associations and institutions have expressed an interest in joining the coalition. Activities planned for FY12 include expanding coalition membership, providing oversight and feedback regarding data collection, policy advocacy on red crab harvest management, and validating and publishing monitoring results.
- Support the INP to establish a budget for long-term stock monitoring of crabs.
- Work with the DIRNEA (National Bureau of Aquatic Spaces) to monitor compliance with red crab close seasons.
- Continue to support the process of establishing a territorial management system for red crab harvesting in the Churute Mangrove Reserve as part of strengthening protected area management.

The Project has planned the following actions in the watersheds of the Galera San Francisco Peninsula, in PN Machalilla, and the Ayampe River watershed:

- Provide technical assistance during the process to update the Management Plan for Parque Nacional Machalilla in order to study and identify legal mechanisms that allow traditional local users to take on fisheries management within the protected area. This includes studying and identifying legal mechanisms that allow the extraction of non-timber forest products, particularly tagua.
- Demonstrate the sustainable management of a micro-watershed in the Galera San Francisco Peninsula and two micro-watersheds in Ayampe, through replicable models that incorporate implementation of best practices for natural resource management that the project has promoted.

### ***Activity 1.1.2.: Promote forest management and conservation (timber products)***

In FY11, the Project expanded the surveillance and enforcement system in PN Machalilla in the Ayampe River watershed. At the request of the MAE provincial office of Manabí, the Project also began implementation of a forest reGENCY system, by hiring a regent. In FY12, the project will continue forestry management activities initiated in FY11.

#### ***Key actions for Activity 1.1.2***

- Continue activities initiated in FY11 following EA approval on June 24, 2011 for Forestry Management, including:
  - Develop at least 22 forestry management plans (Planes de manejo forestal simplificados – PAFSIs for their Spanish name) that will be implemented by at least 22 families in the Ayampe River watershed.
  - Promote sales of timber forest products with new buyers.
  - Regeneration of 1,500 hectares of commercially valuable tree species.
  - Work with Machalilla National Park Director to implement priority activities under the surveillance and enforcement system.

### ***Activity 1.1.3: Strengthen mangrove/ concession management***

Concessions and mangrove management have proven to be an effective strategy and incentive for the conservation of this important resource. Mangrove conservation also plays an important role in regulating the carbon cycle: according to the International Union for Conservation of Nature (IUCN), mangroves have an important role to play in capturing atmospheric carbon and trapping it in sediments. The IUCN has established that mangroves could be more efficient in carbon sequestration than tropical or temperate woodlands. The Project has been supporting critical actions relating to mangrove concession management, including the design and implementation of a surveillance and enforcement system (which currently covers an area of 60,000 ha in the Gulf of Guayaquil) and technical assistance to grant new mangrove concessions and renew existing ones. The economic impact (PIR 2) of mangrove protection lies in the sustainability of the red crab value chain which benefits more than 4,000 crabber families. The Project will continue to provide technical assistance for this activity.

#### ***Key actions for Activity 1.1.3***

- Continue providing technical assistance to strengthen the surveillance and enforcement systems for the concessions (including training in equipment management and maintenance, complaint follow-up, and creating enforcement logs and reports).
- Provide technical assistance to concessionaires in 6 de Julio, Balao, Nuevo Porvenir and Mondragón, Puerto la Cruz, Buena Vista and El Conchal for: i) implementation of the actions set out in their management plans, ii) preparation and submission of reports to the management authority of the areas under their guardianship, iii) support for data recording, iv) information requests from the authority, v) processing of any complaints, and vi) training in best fishing

practices. The technical assistance also includes zoning activities and institutional capacity building.

- Document the experience of mangrove management and protection through concessions, at the request of the Minister of the Environment.

***Activity 1.1.4: Promote implementation of critical actions in the environmental management plan for the Ayampe River watershed and selected micro-watersheds of the Galera San Francisco Peninsula Francisco.***

In FY10 the project developed POAMs for the Ayampe River watershed and the micro-watersheds of the Galera San Francisco Peninsula. These environmental management plans have identified key conservation areas, primary threats, communities, and their relationship with conservation, and strategies to minimize threats. Ultimately, the goal for municipalities and provincial and parochial governments will use the POAMs as a guidebook for planning and policy making.

In FY12, the Project will continue to support the authorities in implementing the activities in the plan, with a goal of having at least two new municipal ordinances adopted for the Ayampe River watershed and the POAMs included in the Land Management Plans [Planes de Ordenamiento Territorial - POTs].

The Project will continue to use the field school methodology [escuelas de campo – ECA] in the Ayampe River watershed as a tool for promoting best practices and for implementing critical actions such as protecting forests, terracing to prevent erosion, reducing monocultures, integrated farm zoning, limiting the use of agrochemical products, and protecting water sources. The Project will also support municipal environmental education/communications programs in this watershed.

In the Galera San Francisco Peninsula, it will work with the EcoCacao farmer's association (as an implementing partner) on micro-watershed and farm management, including the dissemination of best practices.

***Key actions for Activity 1.1.4***

- Promote implementation of best management practices (conservation corridors, reduced use of pesticides, forest conservation, and integrated farms) for natural resources conservation.
- Provide technical assistance to local governments connected to the Ayampe River watershed for implementation of the activities set out in the POAMs, and to ensure that POAM recommendations are incorporated into at least two municipal ordinances (which also entails including the POAMs in POTs) in Puerto López and Jipijapa.
- Provide technical assistance to the municipalities of Puerto López and Jipijapa to guide implementation of their environmental education/communication programs, and support implementation of communications initiatives in components related to biodiversity conservation. The Project will also take steps to ensure that

municipal budget allocations include funding for environmental training for next year.

- Promote the implementation of best practices in natural resources management (field lay-out, agroforestry, etc.) and water management on the farms of EcoCacao members and in the Ayampe River watershed, using various tools and methodologies, including ECAs, and the implementation of farm management and water conservation plans.

#### ***Activity 1.1.5: Promote protection of water source/riverbank vegetation***

Water is essential for human populations. Water conservation is tied to woodlands in the Project's target watersheds (normal flows affected by deforestation and climate change), and it has therefore been working to protect water sources through critical habitat conservation. In FY12, the Project will continue with this approach, but will add a climate change response component that includes technical assistance for the management and storage of this resource in the Ayampe River watershed and EcoCacao farms.

#### ***Key actions for activity 1.1.5***

- Establish micro-watershed conservation and restoration mechanisms (in Ayampe - Vueltas Largas and La Crucita- and in micro-watersheds of the Galera-San Francisco Peninsula- Quingue and/or Caimito-) based on integrated farms. Activities include reforestation, prevention and mitigation of erosion, best management practices (like reducing or eliminating pesticides, shifting from monocultures to agroforestry schemes, etc.).
- Provide technical assistance to families in Ayampe and on the farms of EcoCacao members for implementation of best practices for the protection of water sources and riverbanks on integrated farms, and for water management and storage.

#### ***Strategy 1.2: Rehabilitate degraded habitats***

This strategy focuses on restoring habitats for establishing conservation corridors. The Project will seek out partnerships or incentives to ensure the sustainability of these actions.

#### ***Activity 1.2.1: Promote reforestation/regeneration***

In FY 2010 and 2011, the Project supported reforestation activities, including the establishment of nurseries, in watersheds of the Galera San Francisco Peninsula and in the Ayampe River watershed. In FY12, it will continue to pursue reforestation efforts using these nurseries as part of a strategy to promote and develop integrated farms on the property of farmers who belong to EcoCacao, with a focus on developing conservation corridors. Reforestation, recovery, and natural regeneration promotion/protection activities will be implemented in the Ayampe River watershed.

*Key actions for activity 1.2.2:*

- Provide technical assistance with reforestation to provincial, municipal and parochial governments to help them target reforestation in critical areas identified in the POAMs.
- Promote reforestation and natural regeneration promotion/management activities on EcoCacao's integrated farms and on farms in the Ayampe River watershed - Vueltas Largas, La Crucita, El Sobrero, Río Blanco, and San José de Piñas-, including the promotion and development of conservation corridors through farm management plans.
- Strengthen regeneration of 1,500 has of commercially valuable tree species in Ayampe initiated in FY11. In accordance with the FRA for the life of the project this will eventually be expanded to 2,500 has.

## **Threat 2: Climate change**

Climate change due to natural and anthropogenic causes can exert pressure on ecosystems, habitats and species, including human populations. The impacts of climate change include changes in run-off water, altered flowering patterns, floods and droughts.

Anthropogenic activities influence climate change through the release of atmospheric carbon: for example, deforestation and slash-and-burn techniques exacerbate the greenhouse effect.

### **Strategy 2.1a: Support for the Sub-Secretariat of Climate Change at the National Level.**

The Project will support the Sub-Secretariat for Climate Change in two specific activities: a skills assessment at the different levels of government in the area of Climate Change Adaptation and Mitigation and the development of guidelines for implementation of a National Strategy. Additional support will be subject to additional funding being available.

### **Strategy 2.1b: Establish and implement climate change response and adaptation measures – local level**

In FY11, the Project conducted a vulnerability study for RVS Manglares El Salado and the Instituto Nacional de Meteorología e Hidrología – INAMHI conducted a similar study for PN Machalilla. Based on this information, the Project developed climate change response action plans. In FY12, some of the adaptation measures in the plans will be implemented and the results disseminated.

In addition, in FY12 the Project will provide technical assistance to the Guayas Prefecture for the design of a Climate Change Strategy for Guayas Province. This initiative is in response to the Province's request for support to develop this strategy. Project support is contingent on the funds the Prefecture has available and on the political will to pursue this process.

### ***Activity 2.1.1.: Implement climate change adaptation measures***

#### ***Key actions for activity 2.1.1***

- Provide technical assistance for the design of a Climate Change Strategy for Guayas Province, which includes a baseline, a vulnerability study, and an action plan with budgets and assigned staff.
- Promote coordinated efforts with the national and provincial governments and the Guayaquil municipality for the recovery of Estero Salado as an adaptation measure.
- Coordinate and strengthen existing youth groups through the implementation of cultural incentive programs that will consolidate their role as local agents of change, as an adaptation measure in RVS Manglares El Salado.

- Design a Virtual Training System on environmental issues for local officials, youth leaders, and social communicators, with a focus on climate change adaptation measures in RVS Manglares El Salado.
- Implement at least one adaptation measure for PN Machalilla.

### **Strategy 2.2.: Reduction of greenhouse gases and carbon sink conservation**

This strategy does not include its own activities, but instead ties in to other Project activities that promote best practices (such as changing slash-and-burn practices) and conservation of carbon sinks by preserving forest remnants and promoting restoration and reforestation. The work plan's activities that relate to this strategy are:

1.1.2. Promote forest management and conservation (timber and non-timber forest products)

1.1.3. Strengthen mangrove/concession management

1.2.1. Promote reforestation/natural regeneration of woodlands.

## **PIR 2: Improved Local livelihoods**

### **Threat 3: Lack of economic alternatives**

The Project's mandate is biodiversity conservation by reducing threats. One of the greatest threats to biodiversity in Project intervention areas is the lack of economic alternatives that leads to the unsustainable use of natural resources. Living in remote areas without access to credit or markets, local residents frequently focus on opportunity costs (particularly illegal logging, farming and livestock) mainly for self-consumption. These activities bring about changes in land usage and residents generally face obstacles in trying to market or sell any of the products not consumed by their family. The Project has not promoted traditional farming activities (such as corn farming or stock-raising) with potential to boost community incomes, because they pose a threat to biodiversity conservation.

### **Strategy 3.1: Development and promotion of market-based economic alternatives and economic incentives for critical habitat conservation**

To reduce this threat, the Project has focused on generating economic initiatives that are based on existing biodiversity and rely on its conservation. One example of a successful link between habitats and ecosystem conservation and economic resource generation that the Project has promoted is support for mangrove concessions, which have generated economic resources through the harvesting of red crab. This in turn creates incentives for conserving its ecosystem.

#### ***Activity 3.1.1 Facilitate access to environmentally responsible markets and support for microenterprise***

The Project will continue to facilitate market access for products associated with, or that promote, biodiversity conservation. It will approach this from two angles: 1.) by

strengthening value chains by connecting responsible markets to producers that apply environmentally friendly practices based on the “honest broker” principle, and 2.) by providing technical assistance for microenterprises working with products such as red crab, tagua, and tourism, all of which depend on biodiversity conservation.

#### **Key actions for Activity 3.1.1**

- Facilitate linkages and develop commercial relationships (and needed follow-up) between farmers implementing best environmental practices and responsible markets (such as hotels) in the watersheds related to the RM Galera San Francisco. Products include tropical fruit and cacao produce on farms belonging to members of EcoCacao, an organization that achieved organic certification through a small project grant. The project will continue grant activities with Ecocacao, to strengthen conservation of fragile habitats by promoting sustainable agricultural practices (including organic certification) throughout its member’s farms (96) while facilitating linkages and developing commercial relationships with responsible markets.
- Aid EcoCacao in obtaining credit for productive activities, including work infrastructure and capital.
- Develop ties between tagua nut gatherers and the market, focusing on creating value added for this resource. To this end, the Project will explore the feasibility of establishing at least one pilot workshop for manufacturing animal figurines in the Ayampe watershed.
- Provide technical assistance to crabbers to improve their business relationships (in live crab sales).
- Determine MINTUR’s interest in and ability to co-finance an event to promote tourism in the Ayampe watershed.
- Support crabbers associations (with a focus on women-operated microenterprises pursuant to the Project’s policy of taking into account gender equality and equal opportunity for men and women who participate in and benefit from the Project):
  - Build the organizational capacity of productive groups
  - Maintain and establish new business ties for crab marketing and sales
  - Participate in local promotional events (i.e. crab festival)

#### **Activity 3.1.2: Develop economic incentives for conservation**

In FY11, the Project supported programs and activities related to income generation through conservation incentives. Examples include imparting best practices through field schools and facilitating market access (including the Jipijapa municipal market and hotels) for farmers who have signed conservation agreements.

### **Key actions for Activity 3.1.2**

- Continue supporting farmers to improve their market and sales, and include more farmers. In FY11, the project obtained a commitment from the Municipality of Jipijapa to provide space in the municipal market to farmers who have signed conservation agreements with the Project. By accessing the market farmers will sell directly to end-buyers without having to depend on intermediaries.

### **Activity 3.1.3 Support accessing and maintaining Socio Bosque's incentives**

Since its inception, the Project has supported the Socio Bosque program as a mechanism to create an economic incentive for communities in high biodiversity forest areas in the Gran Reserva Chachi and its buffer zone and in the RM Galera San Francisco river basins and the Ayampe River watershed. The Project will continue to provide technical assistance to Socio Bosque beneficiaries who joined the program last year and will facilitate access to the program for new landowners in priority areas (forests in the Gran Reserva Chachi, Ayampe River watershed, and the Chongón Colonche range as well as potentially Churute Mangrove Reserve).

### **Key actions for Activity 3.1.3**

- Promote Socio Bosque, including new areas (BP Chongón Colonche and potentially RE Manglares Churute).
- Provide technical assistance for land titling and finalize titling processes begun in previous years.
- Provide technical assistance for accessing Socio Bosque (by developing investment and monitoring plans).
- Provide technical assistance for maintaining Socio Bosque incentives and accessing the updated/increased incentive rates (updating investment plans and preparing quarterly reports required by Socio Bosque).
- Promote access to the Socio Bosque program in RE Manglares Churute and possibly in PN Machalilla. This will be contingent on a legal analysis of the ability to apply such incentives in these protected areas.
- Bring at least 5,000 Ha of new critical habitats of the Chongón Colonche mountain range into the Socio Bosque program and at least 200 hectares in Galera San Francisco.
- Provide technical assistance to expand conservation area in at least one community in the Gran Reserva Chachi under the Socio Bosque Program and support at least one new Chachi Center (potentially with 1,500 has) in applying to Socio Bosque.

### **Activity 3.1.4.: Strengthen value chains that promote biodiversity conservation**

Since its inception, the Project has been providing technical assistance to stakeholders in key positions in value chains related to biodiversity. In the red crab value chain, for example, the Project has provided technical assistance for resource management (stock assessment, surveillance and enforcement), improved harvesting methods (elimination of harvest nets), production (improved hygiene and processing), and marketing (identification of anchor companies, agreements between buyers and producers, and improvements to the cold chain). While these activities have contributed significantly to improving the economic benefits of the chain, (bigger harvests, elimination of losses to pirating, better prices for crab pulp), their impact has not been quantified. This activity focuses on evaluating the impact of the Project's technical assistance to the chains and identifying functions that require strengthening.

#### **Key actions for Activity 3.1.4**

- Assess the economic impact the Project's technical assistance has had on the red crab value chain and its contribution to the incomes of the beneficiary families and identify functions along the chain that need to be strengthened with technical assistance from the Project.
- Strengthen the functions along the red crab value chain identified in the Project's impact analysis, particularly those that improve the quality of life of stakeholders along the chain.
- Build institutional capacity through technology transfer and training for mangrove concessionaires in Mondragón, Buena Vista, Puerto La Cruz, el Conchal, 6 de Julio, Balao, Nuevo Porvenir, RE Manglares Churute. Include crab bed zoning, promoting of good collection practices, etc.

### **PIR 3 Partnerships formed for ongoing support for biodiversity conservation**

#### **Threat 4: Insufficient institutional capacity for biodiversity conservation**

The MAE has made significant efforts in the area of biodiversity conservation from the outset. However, budget constraints and the size of the protected areas hamper its ability to reach its goals. The Project worked with the MAE throughout FY11 to improve its capacity to manage protected areas (RM Galera San Francisco, PN Machalilla, RE Manglares Churute and RVS Manglares El Salado).

Sectional governments sometimes fail to include biodiversity conservation in their planning and management processes and this creates gaps at the regulator and planning level that pose a threat to biotic resource conservation.

Another dimension of this threat is that many of the resources that might be earmarked for biodiversity conservation get lost, are duplicated, or are not sustained over time due to poor inter-institutional coordination, which undermines the effectiveness of conservation activities.

### **Strategy 4.1 Strengthen management of protected areas**

In FY12, the strategy will focus on providing technical assistance and support to the directors of protected areas connected to the Project. Advisory services will be provided based on the needs of the directors of each area and carried out pursuant to a specific work plan. This assistance will be focused on activities related to Project goals.

The Project will also provide technical assistance as necessary to the MAE's regional directors as well as high-level technical assistance to the MAE focused on policy-making.

#### **Activity 4.1.1 Build institutional capacity**

Just as in FY11, in FY12, the Project will continue to provide technical assistance to directors of protected areas and the MAE regional directors, with a focus on planning, optimizing area management procedures, and optimizing budgets and financial resources.

#### **Key actions for Activity 4.1.1**

- Provide technical assistance to improve management and administration of protected areas in the Project's geographic target areas (RE Manglares Churute, RVS Manglares El Salado, PN Machalilla, and RMC Galera San Francisco).
- Provide technical assistance for the development of annual operating plans, prioritizing budget related activities with strategies for leveraging funds and assistance for budget execution.
- Develop a procedures manual for directors of protected areas and foster experience-sharing on protected areas management.
- Provide technical assistance to the MAE's provincial office in Esmeraldas and Manabí.
- Provide technical assistance to provisional, municipal, and parochial governments in activities related to biodiversity conservation set out in the POAMs.
- Disseminate the management plan for RE Manglares Churute and provide technical assistance for the implementation of priority activities.
- Analyze and document the lessons learned from the Project's actions in protected areas and disseminate the results during an event that brings together the directors of different areas to share their experiences.
- Continue providing technical assistance to the security committee of the Ayampe River watershed and PN Machalilla to strengthen the integrated surveillance and enforcement system.

PN Machalilla has a special status in that its management category does not allow extractive activities. In view of the fact that communities are settled within the area and lack economic options, however, it is critical to find a legal avenue for regulating economic activities there. The director of the area has requested technical assistance from the Project for the following activities:

- Update and disseminate the management plan for PN Machalilla.

- Analyze legal mechanisms for regularizing tagua harvesting within the protected area and define and regulate this activity and tagua management in the PNM (should the analysis show that it is feasible).
- Analyze legal mechanisms for regularizing fishing in the PNM marine area based on its management category.
- Conduct a legal analysis of the applicability of Socio Bosque incentives for communities that settled before the protected area was established.
- Develop a proposal for tourism management alternatives in the PNM.

#### ***Activity 4.1.2 Design and support implementation of surveillance and monitoring systems***

Surveillance and enforcement systems are a priority for biodiversity conservation and improving public security through their impact on threat reduction, particularly in areas where resource users play an active role in their design and implementation.

In FY12, the Project will continue to support surveillance and enforcement systems for mangrove concessions in the Gulf of Guayaquil and RE Manglares Churute, and for Socio Bosque, particularly in the Gran Reserva Chachi. It will also provide technical assistance for surveillance and enforcement systems in the marine area of PN Machalilla, and in RM Galera San Francisco. The Project's role in surveillance and enforcement systems is to facilitate and serve as a catalyst for the actions of the responsible institutions and others working in those areas, and provide essential equipment for those activities.

#### ***Key actions for activity 4.1.2***

- Provide technical assistance to strengthen the surveillance and enforcement system for the Gulf of Guayaquil.
- Provide technical assistance for implementation of a unified surveillance system for Socio Bosque in the Gran Reserva Chachi, in conjunction with the MAE, FECHE, GIZ, CI, and Socio Bosque.
- Strengthen priority activities in the surveillance and control system for PN Machalilla together with Park Director.
- Provide technical support for the surveillance and control system for the Reserva Marina Galera San Francisco.

#### ***Strategy 4.2.: Improve inter-institutional communication and coordination***

This strategy is designed to strengthen existing and promote new conservation coalitions. These coalitions are platforms to coordinate and plan conservation efforts among a wide range of stakeholders within specific Project areas and to complement the activities of USAID and other donors through similar or complementary projects. The strategy is also to promote direct partnerships with public, private and community stakeholders to leverage funds and to implement Project activities. The Project will also monitor coalitions periodically assess their effectiveness and revise the PMP accordingly.

#### *Activity 4.2.1: Strengthen coalitions/partnerships*

Since FY10, the Project has supported an initiative by the MAE's Sub-Secretariat of Coastal and Marine Management to create a coalition in the Ayampe River watershed and another in RMC Galera San Francisco and its watersheds. These coalitions involve public, private and community sectors. A coalition has also been established in mangrove concessions in the Gulf of Guayaquil (originally comprising the INP, the Project, and 7 crabbers associations). The Project will continue to support these conservation platforms to share information, avoid duplication of efforts, and coordinate with the authorities. In FY 2012, the Project's strategy for the coalitions of the Ayampe River watershed and RMC Galera San Francisco and its watersheds will be to empower MAE's leadership. Its strategy for the coalition of the Gulf of Guayaquil, will focus on expanding the coalition's membership and geographic area. The Project will also support the coalition formed in the Gran Reserva Chachi, led by FECCHE.

In addition to the coalitions, the Project has established partnerships with numerous public, private, and community stakeholders. These partnerships will be maintained and strengthened based on how effective they are.

#### *Key actions for activity 4.2.1*

- Strengthen the conservation coalition of the Gulf of Guayaquil (crab associations and the INP) through the inclusion of new stakeholders (fishermen's associations, MAE, DIRNEA, Guayas Prefecture, etc.).
- Continue supporting coalitions in RM Galera San Francisco, in the watersheds of the Peninsula of the same name, and in the Ayampe River watershed. The Project will continue publishing the coalitions' bimonthly newsletters, which has proven to be an effective tool for coordination and disseminating information.
- Support the conservation coalition of the Gran Reserva Chachi, being led by a coalition member.
- Coordinate activities with other projects by USAID and other donors, as well as with government institutions (PROMUNI, GEF, MAGAP, MINTUR, etc.).
- Follow-up on and strengthen the partnerships and relations established thus far with public, private, and community stakeholders, such as the partnership with the Guayas Prefecture on the issue of climate change, and with Socio Bosque.

#### *Activity 4.2.2 Obtain co-financing and/or leverage funds*

The Project will continue to offer small grants to local organizations to support actions that contribute to achieving Project objectives, such as promoting microenterprises or supporting mangrove concessionaires. The Project will also continue leveraging funds from other organizations to ensure the sustainability of key actions once the Project has ended and will follow-up on effective partnerships established with other organizations thus far.

### *Key actions for activity 4.2.2*

- Continue to offer small grants as a means of achieving the Project's objectives. It will offer a follow-on grant to the one awarded to EcoCacao in FY11.
- Continue to pursue key actions that ensure leveraging of funds.

### **Strategy 4.3.: Public policy advocacy**

The Project will engage in public policy advocacy to promote good resource management and create a legal and institutional framework for biodiversity conservation.

#### *Activity 4.3.1.: Promote technical assistance to review and revise policies and programs related to biodiversity conservation and management.*

In FY12, the Project will continue to support provincial, municipal, and parochial governments on environmental issues, and particularly the activities of the POAMs, mangrove concessions, and the MAE in protected areas. The Project's support in the public policy arena will focus on responding to requests from the MAE for technical assistance on issues related to the Forests Law (recently included in the Environmental Code), biodiversity, and climate change, many of which were mentioned above.

### *Key actions for Activity 4.3.1*

- Support the design of the Climate Change Strategy for Guayas Province.
- Continue supporting management of Parque Nacional Machalilla (updating the management plan, strengthening surveillance and enforcement, administration and management), Reserva Marina Galera San Francisco (surveillance and enforcement), RE Manglares Churute (surveillance and enforcement; administration and management), and RVS Manglares El Salado (surveillance and enforcement; administration and management).
- Support policy-making for protected areas (fishing and non-timber forest resource management in protected areas).
- Continue supporting access to Socio Bosque and promoting the program.
- Technical assistance for provincial, municipal, and parochial governments for implementing activities set out in the POAMs.
- Technical assistance for the Sub-Secretariat of Natural Patrimony to finalize the Environmental Code, which now includes the Forests Law.
- Specific technical support for the Sub-Secretariat of Climate Change for a skills assessment at the central level and of the GADS, and promote guidelines for managing Climate Change Adaptation and Mitigation.

- Specific support for the Office of Biodiversity of the Sub-Secretariat of Natural Patrimony to conduct a critical review of its mandate, strategies, and programs.

*Activity 4.3.2. Technical and legal support for drafting the National Forest Patrimony Registry of the Environmental Organic Code*

At the request of the MAE's Sub-Secretariat of Natural Patrimony, the Project will continue to provide technical assistance and advisory services for drafting the National Forest Patrimony Chapter of the Environmental Organic Code. The Project is playing a key role in the development of technical standards and regulations for its implementation. In FY12, the Project will continue providing technical assistance for key activities established in the blueprint.

*Key actions for activity 4.3.2*

- The Project will continue to provide technical assistance for following up on key activities in the blueprint for the National Forest Patrimony Registry of the Environmental Organic Code. Specifically, it will provide strategic technical assistance to the Sub-Secretariat of Natural Patrimony during the adoption process of the Environmental Code, particularly as it regards the chapter on the Forestry Law. This support is flexible and subject to needs and requests of the Sub-Secretariat of Natural Patrimony and other government entities with responsibilities related to the Environmental Code and to drafting the regulations and technical standards of the Forestry Law.
- Complete the studies carried out and used in preparing the draft Forestry Law.

## 4 . WORK PLAN BY GEOGRAPHIC AREA

The tables below summarize the expected results, key actions, geographic areas and sites, timelines, and responsible staff/implementing partner in the Project's target areas for FY12.

### 1) Gran Reserva Chachi and its buffer zone

Threats	Expected results	Key actions	Geographic area/site	Quarter				Responsible staff/Implementing partner
				1	2	3	4	
<b>Illegal logging and change in land use (deforestation)</b>	18,945.67 Has continue to benefit from the Socio Bosque program and an additional 1,500 has. enter the program	Provide technical assistance to communities to meet the requirements for maintaining/accessing Socio Bosque's incentives: i) updating of investment plans, and ii) monitoring woodland conditions. This includes updating incentive amounts per new (increased) rates.	Chachi Capuli, Guadual, Calle Manza, Sabalito and Tsejpi Centers.  Centro Chachi Pichiyacu (new)  Afrodescendent communities of San Chispero, San Miguel and Playa de Oro	X	X	X	X	Altrópico
	At least one community expands their conservation area under Socio Bosque	Technical assistance in creating and submitting files for expanding areas.	Chachi Sabalito and Gualpi del Onzole Centers	X	X	X		Altrópico
	Unified monitoring system operating	Strengthen surveillance and control system	Chachi Capulí, Guadual, Calle Manza, Sabalito and Tsejpi Centers	X	X	X		Altrópico
<b>Weak coordination and technical/financial capacity of local stakeholders</b>	Coalition for Gran Reserva Chachi and area of influence led by a coalition member	Empower FECCHE or other member to lead the coalition.	Chachi territory in Cayapas	X	X	X	X	Altrópico
<b>Lack of economic initiatives</b>	At least 300 families have improved their income through implementation of environmentally friendly productive activities.	Support for developing investment plans (Socio Bosque) with a focus on productive activities to maintain the incentive.	Chachi Capulí, Guadual, Calle Manza, Sabalito, Gualpi del Onzole and Tsejpi Centers. Afro communities of San Chispero, San Miguel and Playa de Oro	X	X	X		Altrópico
		Document impact of implementing conservation incentives on the family economy.	Chachi Capulí, Guadual, Calle Manza, Sabalito and Tsejpi Centers. Afro communities of San Chispero, San Miguel and Playa de Oro		X	X		Altrópico

## 2) Reserva Marina Galera San Francisco and watersheds of the Galera San Francisco Peninsula

Threats	Expected results	Key actions	Geographic area/site	Quarter				Responsible staff/Implementing partner
				1	2	3	4	
<b>Loss and /or alteration of critical habitats</b>	96 properties with conservation areas are implementing farm management plans	Consolidation of conservation corridors through farm plans emphasizing best practices (conservation of water sources/riverbanks/agroforestry, organic farming, etc.)	Chipa, Quingue, Caimito, 7 de Agosto, Tonchigue, Quitito, El Cabito, El Aguacate, La Tablada, Matambal, Galerita, La Mina.	X	X	X	X	EcoCacao, George Fletcher
	30 farms have a water management system through implementation of climate change adaptation measures.	Technical assistance and training in water management for farmers.		X	X	X	X	
		Implementation of basic water management adaptation measures (development of replicable models).						
	At least five applications (aprox 200 has.) submitted to the Socio Bosque program.	Support for accessing Socio Bosque.	Rio Bunche, Cabo, Quingue, Caimito, 7 de Agosto and Tonchigue	X	X			
<b>for biodiversity conservation</b>	Coalition for la REMGSF led by the MAE	Support the MAE so that it can lead the coalition.	REMGSF	X	X	X		Cristóbal Rodas
	The Marine Reserve has an action plan and secures a budget for implementation of the management plan.	Technical assistance to the MAE for implementation of the reserve management plan.	Reserva Marina Galera San Francisco	X	X	X	X	Manuel Bravo
	The Marine Reserve has an operating surveillance and control system.	Support the MAE in monitoring and implementation of the surveillance and control system for Reserva Marina Galera San Francisco.		X	X	X	X	Patricio Goyes
<b>Lack of economic initiatives</b>	At least 96 families have improved their incomes through implementation of environmentally friendly productive activities.	Support EcoCacao's marketing system.	Area communities	X	X	X	X	EcoCacao
		Provide technical assistance so that EcoCacao can establish partnerships for accessing financing for infrastructure and work capital.	EcoCacao	X	X			Consultant
		Document the impact of implementing good practices for natural resource management on the family economy.	Rio Bunche, Cabo, Quingue, Caimito, 7 de Agosto and Tonchigue		X	X		Henry Quiroz

### 3) Parque Nacional Machalilla and Ayampe River Watershed

Threats	Expected results	Key actions	Geographic area/site	Quarter				Responsible staff/Implementing partner	
				1	2	3	4		
<b>Insufficient institutional capacity for biodiversity conservation</b>	Administration of the Parque Nacional Machalilla strengthened in planning, information management for decision-making and strengthening sanctions	Technical assistance for preparing and monitoring the Annual Operating Plan.	PNM	X	X	X	X	Manuel Bravo	
		Preparation of a project proposal to obtain internal and external resources.		X	X	X	X		
		Hold a park ranger course for the marine area to improve its capabilities and strengthen administrative procedures for civil and criminal penalties as necessary.		X	X	X	X		
	Management plan updated, disseminated, and being implemented.	Technical assistance to update, disseminate, and implement the management plan for PNM.		X	X	X	X	Luis Arriaga Manuel Bravo	
	Policy for harvesting and management of the tagua resource for communities settled in the PNM.	Assess and regulate tagua harvesting and management in PNM.		X				Diana Vinueza	
		Analysis of legal mechanisms for harvesting tagua in the protected area.			X				
		Establishment of a policy/agreements on the use of this resource.			X	X	X		
	Human Settlements Policy in process and included in the Management Plan.	Prepare a roadmap based on the experience of working with Human Settlements in SNAP.				X			Diana Vinueza
		Support for securing resources to update the information on current land use in the PNM which will guide decision-making processes concerning population settlements, road infrastructure, and zoning.							
		Implementation of the actions set out in the blueprint for developing a policy on settlements.							
Advisory services regarding the structure and incorporation of the Introduced Species Management Program.									
Analysis of the legal and fisheries situation to	Rapid Assessment of fishing activity in the PNM (types of	Marine area PNM	X				Manuel Bravo		

regularize this activity in the PNM marine area based on its management category.	fisheries, fishing gear, target species, places caught and estimated number of boats operating each day.						
	Facilitate conflict management in fishing communities.						
	Provide advisory services to decide whether fisheries would be compatible with conservation objectives for PNM. Workshop/Meeting with the Provincial Director of the MAE-Manabí, the MAE's Area Manager and Biodiversity Office, and SGMC to make decisions based on the information.						
	Provide advisory services to the PNM and the Provincial Office in Manabí for identifying and implementing specific fishing management measures.						
Proposal for tourism management alternatives in the PNM	Technical assistance for tourism: a) Analyze management alternatives and develop a blueprint, and b) Implement actions identified in the blueprint, which might include: i) conflict management; ii) management system that facilitates PNM oversight; iii) support for drawing up legal instruments.	Isla Salango PNM	X				Manuel Bravo Arnaldo Rodríguez
Manual for directors of protected areas prepared and approved by the MAE, disseminated and distributed.	Document the process of strengthening protected areas with a focus on coordination and priority-setting with PNM donors.		X	X	X	X	Manuel Bravo, Manfred Altamirano, Consultant
Systematization of experiences in protected areas management.	Event for sharing experiences in protected areas management.	PNM			X		Diana Vinueza
Terrestrial and marine surveillance and enforcement system (including the Puerto Lopez security committee) strengthened.	Support priority activities of the Surveillance and Enforcement System together with PNM.		X	X	X	X	Cecilia Araujo Manuel Bravo Patricio Goyes
	Fundraising for implementation of security projects (communications network and community alert systems).	PNM and Ayampe Watershed		X	X	X	
	Facilitate inter-institutional relations		X	X	X		

		between the PNM, Navy, and National Police for surveillance and enforcement in the PNM and security.						
	Coalition led by the MAE coordinating actions for management of the PNM and Ayampe River watershed.	Meetings for dissemination and coordination of actions in the Ayampe watershed and the PNM.		X	X	X	X	Diana Vinueza
		Preparation of bimonthly newsletters from the Coalition.		X	X	X	X	
Climate Change	PNM is implementing at least two climate change adaptation measures.	A comparative analysis of the vulnerability studies in PNM and El Salado.	PNM	X				CIIFEN
		Design of a guide to best practices for climate change adaptation.		X	X			
		Implementation of climate change adaptation measures resulting from the vulnerability study.		X	X	X	X	
	PNM has a land tenancy management plan included in its management plan.	Support the PNM in disseminating the policy options report prepared at the provincial, regional, and national levels.		X				Manuel Bravo ECOLEX
Loss or alteration of critical habitats	At least two ordinances approved on environmental issues related to the POAM (including activities in the Land Management Plan/POA).	Technical assistance to local governments to implement priority activities of the POAM.	Jipijapa and Puerto López	X	X	X		ECOLEX
	An environmental education program designed and being implemented by the local governments of Jipijapa, Puerto López, and PNM.		Jipijapa and Puerto López	X	X	X		ECOLEX
	At least five communities are implementing good practices for natural resources conservation management, including water storage and conservation of water sources and riverbanks	Promotion of good practices for natural resources management in the communities	Vueltas Largas, La Crucita, El Sobrero, Río Blanco, and San José de Piñas	X	X	X		CyD
	Continue promoting forestry management in 3,000 Has (for FY12 includes 22 PAFSIs and strengthening regeneration in 1,500 has)			X	X	X	X	Rainforest Alliance

	At least 2,000 Has that have been titled, have files, and have joined Socio Bosque.	Technical assistance for land titling.	San Francisco Rio Blanco	X	X			ECOLEX
		Provide technical assistance for communities to qualify for entry into Socio Bosque.				X	X	ECOLEX
	6,500 Has maintained in Socio Bosque	Technical assistance to maintain Socio Bosque incentives: i) updating of investment plans and ii) monitoring woodland conditions.	Dos Mangas, Loma Alta and private properties	X	X	X		ECOLEX
<b>Lack of economic alternatives</b>	At least 500 families have improved incomes.	Follow-up on sales in the Jipijapa market (60 families).	Las Piñas, Pedro Pablo Gómez, La Crucita, and El Sombrero.	X	X	X	X	Cecilia Araujo Diana Vinueza
		Strengthen collection and marketing of tagua and assistance to set up an animal figurines workshop (80 families)		X	X	X	X	CyD
		Determine MINTUR's interest in jointly organizing and financing an event to promote tourism in the Ayampe watershed.	San Francisco and Rio Blanco. Loma Alta			X		Diana Vinueza
		Technical assistance to maintain Socio Bosque incentives (397 families)		X	X	X	X	ECOLEX
		Income through sales of wood from managed forest areas (22 families, which form groups linked to new markets)	Río Blanco and San Francisco	X	X	X	X	Rainforest Alliance
	Socio-economic and environmental impact assessment of the application of best management practices.	Document the impact of applying best management practices.	Vueltas Largas and El Sombrero.		X	X		Henry Quiroz

#### 4) Gulf of Guayaquil (including Reserva Ecológica Manglares Churute, la Reserva de Producción de Fauna Manglares El Salado, and mangrove concessions)

Threats	Expected results	Key actions	Geographic area/site	Quarter				Responsible staff/Implementing partner
				1	2	3	4	
<b>Loss and/or alteration of critical habitats</b>	Surveillance and enforcement system operating on 60,000 hectares in the Gulf of Guayaquil (concessions and protected areas)	Technical assistance to strengthen surveillance and control system (training, support, equipment maintenance).	Gulf of Guayaquil (including RE Manglares Churute, RVS Manglares El Salado; Cerritos de los Morreños, Mondragón, Balao, 6 de julio and Nuevo Porvenir.)	X	X	X	X	Patricio Goyes Juan Carlos Santos BIOEDUCAR
		Support joint operations with DIRNEA to enforce red crab close season.		X	X	X	X	
		Request that DIRNEA provide access to a marine VHF frequency activated in the Gulf.		X	X			
	Landowners with forested areas in Reserva Churute are aware of existing conservation incentives.	Promote Socio Bosque in fields in the Reserva Churute that are entered into the property registry in Naranjal and Guayaquil.	Terrestrial areas of RE Manglares Churute	X	X	X		To be determined
	9,258. 57 Has of mangrove concessions are complying with their commitments to the MAE	Technical assistance to concessionaires for: i) implementation of the actions set out in their management plan, ii) preparation and submission of reports to the management authority for the areas under their guardianship, iii) support information registration, iv) requests for information from authorities, v) processing complaints, if any, vi) training in best fishing practices. Technical assistance also includes zoning.	6 de Julio, Balao, Nuevo Porvenir and Mondragón, Puerto la Cruz, Buena Vista and El Conchal	X	X	X	X	Juan Carlos Bioeducar
	Participatory monitoring protocol for red crab harvesting developed and being applied.	Follow-up to the collection of monitoring forms, tabulation and data production for crab management	Mondragón, Buena Vista, Puerto La Cruz, el Conchal, 6 de Julio, Balao, Nuevo Porvenir RE Manglares Churute	X	X	X	X	Iván Cedeño Juan Carlos Santos BIOEDUCAR
Work with the INP on lobbying/drafting regulations for managing the red crab resource based on		Gulf of Guayaquil			X	X	Ivan Cedeño	

		monitoring data.							
		Work on including resources for crab monitoring in the INP budget		X	X				Ivan Cedeño
<b>Insufficient institutional capacity for biodiversity conservation</b>	RE Manglares Churute has a proposal for a strategic plan with key actions	Support for preparing a proposal for an operational plan that contributes to protected area management and includes priorities and strategies for leveraging funds.	RE Manglares Churute	X	X				Manfred Altamirano Iván Cedeño Short-term consultant
	La RE Manglares Churute has a fishing management system that grants fishing rights (fishing registry) and establishes differentiated fishing areas for different groups of fishermen	Support a process for granting fishing rights on the Reserve and continue supporting the process to establish a territorial management system for red crab harvesting		X	X	X			
	Administration of the protected area has increased its budget by at least 20% and budget execution by more than 180%.	Technical assistance for fundraising and budget execution	RE Manglares Churute	X	X	X			Manfred Altamirano
	Management of RPFM El Salado strengthened	Support management of the reserve area: i) planning; ii) review technical information; iii) contracting; iv) work meetings; v) Incorporation of RVS Manglares el Salado in the planning for Guayaquil Ecológico	RPFM El Salado	X	X	X			Manfred Altamirano
	Coalition lead by the INP	Support the Coalition –strengthening and membership growth	Gulf of Guayaquil	X	X	X			INP, Manuel Bravo, Ivan Cedeño
	Experiences and lessons learned about mangrove concessions disseminated.	Document and disseminate experiences and lessons learned about mangrove concessions.				X			Manuel Bravo/Consultant
		Hold an event to present the experience.				X			Manuel Bravo
<b>Climate Change</b>	At least two priority climate change adaptation measures implemented	Promote coordination of efforts between the national, provincial, and Guayaquil municipal governments for the recovery of Estero Salado	RPF Manglares El Salado	X				CIIFEN	
		Coordination and strengthening of the youth groups identified through implementation of cultural incentive programs to consolidate their role as local agents of change		X					

		Develop a Virtual Training System for local authorities, youth leaders, and social communicators on environmental issues with a focus on climate change adaptation.		X				
<b>Lack of economic alternatives</b>	A crab pulp processing initiative obtains certification that enables it to penetrate new markets	Preparation and procedures for obtaining sanitary registration	6 de Julio	X	X	X		Juan Carlos Santos
	Impact of the technical assistance along the red crab value chain ascertained.	Determine the impact of the Project's technical assistance on red crab value chain (concession management plan, surveillance and enforcement of crab, close seasons, etc.)	Mondragón, Buena Vista, Puerto La Cruz, el Conchal, 6 de Julio, Balao, Nuevo Porvenir RE Manglares Churute	X	X			Manuel Bravo/Consultant
	At least 21 households have increased their incomes through the Project's technical assistance.	Strengthen the organizational capacity of productive groups		X	X	X	X	Juan Carlos Santos Bioeducar
		Maintain and create new marketing links for crab sales		X	X	X	X	Juan Carlos Santos
	Participate in local promotional events (crab festival, etc.).		X	X	X	X	Juan Carlos Santos Bioeducar	

## 5) Chongón Colonche Mountain Range

Threats	Expected results	Key actions	Geographic area/site	Quarter				Responsible staff/Implementing partner
				1	2	3	4	
<b>Insufficient institutional capacity for biodiversity conservation</b>	Bosque Protector Chongón management strengthened	Design a management model for the Bosque Protector (BP) Chongón Colonche in conjunction with MAE	Bosque Protector Chongón Colonche	X	X	X	X	Walter Palacios and Diana Vinuesa
<b>Loss and/or alteration of critical habitats</b>	At least 5,000 Has join the Socio Bosque program.	Support for accessing Socio Bosque.	Salanguillo Sinchal Barcelona Las Nuñez La Entrada Febres Cordero	X	X			ECOLEX

## 6) Guayas Province

Threats	Expected results	Key actions	Geographic area/site	Quarter				Responsible staff/Implementing partner
				1	2	3	4	
<b>Climate change</b>	Climate change strategy for Guayas province developed	Support for developing a climate change strategy for Guayas	Guayas Province	X	X	X	X	CIIFEN

## 5. CROSS-CUTTING ACTIVITIES

In addition to its local interventions, the Project has been working at the national level on a number of issues with potential relevance beyond the target areas. The following are among the activities that the Project supported in FY11 and will continue to support in FY12:

1. Continue to support management of PN Machalilla, RMC Galera San Francisco, RE Manglares Churute, and RVS Manglares El Salado.
2. Continue to support access to Socio Bosque and to promote the program.
3. Provide technical assistance for provincial, municipal and parochial governments (environmental planning based on the POAMs)
4. Support the MAE in the development of a new environmental legal framework (Environmental Organic Code, National Forest Patrimony Registry, Biodiversity, and Climate Change issues).
5. Document and disseminate technical materials, success stories, and lessons learned, to promote replication.

In regard to Communications, the Project will continue to: (1) complete production of a video on the impact of Project activities, (2) document and publish case studies, (3) update the Project's webpage on the MAE website, (4) prepare press releases, (5) produce informational materials (such as brochures, "one pagers," articles, etc.), (6) distribute weekly reports, and (7) coordinate sharing project activities with the Press and Culture offices of the United States Embassy in Quito, and the consulate in Guayaquil, through the COTR.

The video will serve as a new communications tool to give visibility to field activities and project impact. It will highlight activities in the Gulf of Guayaquil as well as in the Ayampe River Watershed/Machalilla National Park. It will be used at project events, during visits by USG and GOE authorities, presentations to local authorities/communities/stakeholders, as well as at the USAID 50<sup>th</sup> Anniversary event. It will be available in web format and available to be published on social media networks (Twitter, Face Book), Utube, etc. used by USAID/Washington and/or the US Embassy will be provided to the MAE for inclusion on the project's webpage and to be used and distributed through their media and communications channels. Additional venues will be explored once the edited video is available.

## 6. ENVIRONMENTAL COMPLIANCE

In FY12, the Project will continue complying with USAID environmental regulations through the procedures established in the Environmental Assessment (EA) for forest management and in the following Fichas de Revisión Ambiental (FRA) or Environmental Review Worksheets: 1.) Agroforestry and reforestation, 2.) Mangrove management and red crab harvesting, 3.) Integral farms and 4) Improved forest extraction methods.

The following environmental review worksheets will be prepared: 5) Tagua management, harvesting and processing; and 6) Mechanical control of African snail.

Activities will be updated in Environmental Management and Information System (Sistema de Información y Gestión Ambiental or SIGA) in coordination with implementing partners, and reported in semiannual reports.

In accordance with the procedures established in the EA under the approved preferred Alternative (“Alternative B”), and the respective FRA, the project will continue to take specific measures to implement silvicultural practices that stimulate natural tree regeneration, which is the corresponding mitigation measure for implementing a sustainable forestry management program in 3,000 hectares of the Ayampe River Watershed during the life of the project.